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ABSTRACT

This book contains a 14-lesson module for grades 5-8, focusing on giving students a solid understanding of disease transmission and prevention. It opens with a curriculum overview which stresses the sophistication level of today's adolescents and their inquisitiveness. The overview describes the importance of teaching students how to prevent contracting Acquired Immune Deficiency Syndrome (AIDS) by abstinence from sex and intravenous drug use, and condom use for those students who are already experimenting with sex or will be in the near future. It emphasizes that AIDS education should remain a part of a comprehensive health education program. It provides teachers with concrete behavioral objectives and specific strategies for an effective, age-appropriate AIDS education unit. This book examines the nature and causes of sexually transmitted diseases; helps students develop their research skills concerning AIDS; explains the human immunodeficiency virus (HIV); discusses how AIDS is transmitted and how it can be prevented; and provides pre-tests, post-tests, and evaluation methods. The appendices include a glossary, an evaluation record sheet, and the pre-test/post-test and answer key. (ABL)

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# CONTEMPORARY HEALTH SERIES

# INTO ADOLESCENCE:

# Learning About AIDS

## A Curriculum for Grades 5-8

*Jory Post, MA and Carole McPherson, MA*

Contemporary Health Series
Kathleen Middleton, MS, Series Editor

Network Publications, a division of ETR Associates
Santa Cruz, CA 1988

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# CURRICULUM OVERVIEW

The current level of sophistication in music, videos and movies has created an informed and inquisitive group of adolescents. Many have also had access to *Playboy* magazine, pornographic TV channels and adult videos. There is little they haven't seen or heard. There is a strong need to deal with sexuality in an open, honest and sensitive way. AIDS as an effect of sexuality must also be addressed openly and honestly. AIDS education must begin by taking inventory of what students know, including what they have heard, what they have seen and what they think they know. A curriculum can then be adjusted to be relevant to a specific audience. All future lessons will either be proving, disproving or expanding what students already know.

Rather than expect that students will learn everything they need to know about AIDS within a classroom setting, we should begin as early as fifth grade teaching them about available resources so they may develop personal learning and research skills. They should be taught how to look for articles dealing with AIDS in both newspapers and periodicals. They should also be taught how to classify AIDS-related issues into sub-categories such as politics, economics, human rights and statistics.

The vocabulary of AIDS should be increased extensively in the upper elementary grade levels. Students' foundation of future understanding around AIDS issues will be affected by the strength and depth of their vocabulary. By the sixth grade students should have come in contact with most major terms related to AIDS. After finding out what students know, teaching them basic research techniques and familiarizing them with definitions, students will be ready to

grapple with the reality of AIDS.

AIDS education is most appropriately addressed as one part of a larger comprehensive health education program; therefore, its natural first occurrence is in conjunction with lessons about other sexually transmitted diseases (STDs). Students should be aware that sexual beings have responsibilities to themselves and others. One of those responsibilities is understanding the nature and causes of STDs. Students should be able to compare a variety of STDs regarding their incidence, transmission, symptoms and prevention. If time permits, it is also a good idea to precede this lesson with a similar comparison of diseases in general, such as chicken pox, smallpox and the common cold.

While studying diseases and STDs, the concept of epidemics will certainly arise. The understanding of AIDS as an epidemic can be increased by discussing and analyzing epidemics throughout history.

Students at these grade levels are fascinated with what makes the body work. It is important for students to begin to have a concept of generally healthy immune systems and how they can be kept healthy. It is a good idea to introduce the word "efficient" to describe the healthy immune system, so that an easy transition can be made to the understanding of a deficient immune system.

While students will probably not thoroughly grasp a detailed explanation of the AIDS virus (HIV), the concept should be introduced. This discussion should include a description of other diseases that derail the immune system as well, so commonalities can be observed.

The transmission of AIDS is one of the most important concepts to develop at this grade level. Students are beginning to go through puberty and their bodies and minds are pushing them toward becoming sexual beings. They are beginning to be curious about sexuality, drugs and everything else that may be new to them. Students must know how AIDS is transmitted and how it isn't transmitted. This information must be clear and straightforward. You definitely can get AIDS through sexual contact; you definitely can't get AIDS through hugging and dry kissing; and nobody knows for sure if you can get AIDS through wet kissing, although there have been no known cases to date. This lesson should separate information into what is fact and what is myth.

Once students are clear about ways the AIDS virus can and can't be transmitted, then prevention can be addressed. If they know how to get AIDS, they should be able to prevent it. The best way to prevent AIDS, without question, is abstinence—abstain from IV drug use and abstain from unsafe sexual activity until ready for a monogamous and mutually faithful relationship. Most people feel that this should be the only recommendation for prevention for students at this age level. However, there are students who are either already experimenting with sex and drugs or will be in the near future. Those students cannot be ignored and left prey to a deadly disease because they make risky choices. They must be told that condoms and nonoxynol-9 will help them avoid contact with the AIDS virus. These students must understand the increased risk of multiple partners. Teachers need to be open and honest about the

transmission of the AIDS virus, both sexually and through the use of IV drugs. And at all times we must reinforce the concept that sexual abstinence and avoidance of IV drug use are the only sure ways to prevent infections.

Students must also be familiar with the various symptoms that accompany the AIDS virus. It should be explained that many of the symptoms of AIDS are also symptoms of other, more common diseases and that having one or more symptoms is no reason to panic. Only those who have engaged in risky behavior should be concerned if similar symptoms remain over time.

At these grade levels, students not only have the ability to discuss and analyze issues, they enjoy it and gain more from it than most other activities. Having been given a solid background on AIDS, students will look at opposing viewpoints on AIDS-related issues. Such issues should include public policy, civil rights, employment, insurance and health care, testing and persons with AIDS in schools.

Students also enjoy predicting the future and being asked for their input regarding solutions to problems. Students should be asked to map out their own solutions to critical aspects of the AIDS issue. Some solutions will be mostly fantasy; others may be seeds of future discoveries.

# CURRICULUM OBJECTIVES

| | | |
|---|---|---|
| **Lesson 1** | *What We Think We Know* | ■ Students will be able to describe why it is important to learn about AIDS. |
| **Lesson 2** | *AIDS in the News* | ■ Students will be able to classify information about AIDS according to specific criteria. |
| | | ■ Students will be able to explain the importance of newspapers in keeping them informed about critical issues. |
| **Lesson 3** | *Using Our Experts* | ■ Students will describe how to utilize experts to find accurate information about AIDS. |
| **Lesson 4** | *Information Verification* | ■ Students will be able to analyze the credibility and accuracy of information about AIDS. |
| **Lesson 5** | *Epidemics: A Peek at the Past* | ■ Students will be able to demonstrate the impact of a specific epidemic on individuals and society. |

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| **Lesson 6** | *Characteristics of Diseases* | ■ Students will be able to differentiate among various characteristics of disease. |
| **Lesson 7** | *Diseases: Causes and Transmission* | ■ Students will be able to describe the causes, symptoms, transmission, effects, treatment and prevention of some communicable diseases. |
| **Lesson 8** | *A Comparison of STDs* | ■ Students will be able to explain characteristics of sexually transmitted diseases, including AIDS. |
| **Lesson 9** | *The Immunology of AIDS* | ■ Students will be able to illustrate how the AIDS virus attacks the immune system. |
| **Lesson 10** | *The Truth About Myths* | ■ Students will be able to differentiate between facts and myths about the transmission and prevention of AIDS. |
| **Lesson 11** | *Symptoms Don't Reveal Everything* | ■ Students will identify the symptoms related to AIDS. Students will be able to explain why it is difficult to determine HIV infection. |
| **Lesson 12** | *AIDS, Death and Compassion* | ■ Students will demonstrate compassion for a person with AIDS. |
| **Lesson 13** | *AIDS: Opposing Viewpoints* | ■ Students will be able to analyze two opposing viewpoints to a specific AIDS-related issue. |
| **Lesson 14** | *AIDS: The Solution Is Ours* | ■ Students will be able to synthesize possible solutions to an AIDS-related problem. |

# INSTRUCTIONAL STRATEGIES

In this AIDS module we have incorporated a variety of instructional strategies to develop and maintain students' motivation and interest at a peak. Some strategies are traditional and others are a more interactive approach requiring students to help each other. The specific strategies used in a lesson are clearly identified in each lesson. We have compiled a cumulative list of the strategies used as well as a description of the intent of each strategy.

Brainstorming
Class Discussion
Cooperative Learning Groups
Creative Writing
Current Events
Debate
Developing Research Questions
Dramatic Presentations
Individual or Group Research
Interviewing
Media: Film/Filmstrip/Video
Oral Presentations
Overhead Transparencies
Position Paper
Proposal Writing
Question Box
Script Writing
Simulations and Role Plays
Teacher Lecture
Worksheets

## Brainstorming

Brainstorming is used to open a discussion on an issue. Students are asked to give their ideas and opinions on a specific topic, while other students are asked not to pass judgment on those opinions. The teacher's responsibility is to list everything that is said on the blackboard or

butcher paper. Brainstorming should continue until all ideas have been exhausted or a predetermined time limit has been reached.

## Class Discussion

A class discussion led by the teacher is one of the most valuable strategies used in education. It can begin a lesson, such as a brainstorming session, or it can end a lesson, being used to review and clarify objectives. Nearly all the lessons in this curriculum include some form of class discussion.

## Cooperative Learning Groups

It is our belief that cooperative learning is the most productive teaching strategy currently available to teachers. There are many books available that focus specifically on cooperative learning, most notedly those written by Roger and David Johnson. It is by far the most often used strategy throughout the lessons. Cooperative learning is a process that uses small groups to disseminate information, analyze ideas or teach concepts to the rest of the class. The size of the groups depends on the nature of the lesson and the make-up of the individual class. Groups work best if they range from two members to six, depending on the task.

The structure of the groups and how they are determined will have an effect on the success of your lessons. There are a number of methods from which to choose: student selection, random selection or selection based on ability. Each method has its strengths and weaknesses.

Once groups have been created, the process works best if all group members have an individual responsibility within the group's larger task. Responsibilities can include reader, facilitator, recorder, timer and reporter.

While groups are working on their tasks, it is important that the teacher move from group to group to answer questions and facilitate any problem situations that occur.

## Creative Writing

Having students write short stories or poems about topics they are studying integrates language arts and personal experience into a lesson. This technique could be used as a follow-up for most lessons.

## Current Events

The use of current events as an instructional strategy can apply to every curricular area. An informed public must be aware of issues and able to analyze those issues based on up-to-date information. By using current events as an integral strategy to lessons, we are promoting a positive habit of reading newspapers and magazines on a regular basis.

## Debate

Like position papers, debates will offer students an opportunity to put forth an opinion on an issue and support it with reasons and facts. In a debate the audience members are able to view more than one side of an issue and choose for themselves the side with which they want to align.

## Developing Research Questions

It is a good idea to help students design appropriate questions related to an issue before they begin research. Brainstorming is a good process to use when developing questions, whether done as a whole class or in small groups. Creating good questions will help guide students successfully through research methods.

## Dramatic Presentations

Allowing students to present works they or others have written pertaining to an issue of study is a powerful and exciting activity. These presentations may take the form of plays, skits, news shows or radio shows. This strategy requires ownership on the part of students and offers a stimulating and interesting way of learning factual information.

## Individual or Group Research

Some lessons will require students to do individual or group research in order to complete a task. Research can mean giving students prepared materials from which they have to complete a written or verbal assignment, or it can mean having them locate resources and gather information on their own.

## Interviewing

In our quest for information on a topic, it is useful to invite experts to our classrooms. To maximize what we can learn from them, it is best for students to prepare for the interview. A brainstorming session preceding the interview will allow students to develop individual questions to ask the interviewee. Students can then assist in the organization of the questions for the interview.

## Media: Film/Filmstrip/Video

While the lessons in this unit are not designed around specific films, we strongly support the use of visual media to supplement the lesson content. A list of films has not been included here, as new and timely films are being produced on a regular basis. Media specialists at district, county and area education offices should be consulted to help identify appropriate films for grades 5-8. District and state guidelines must be followed when using films in this sensitive subject area. In many cases administrative approval will be required. Films chosen should be previewed carefully.

## Oral Presentations

A majority of our lessons are designed to have students make oral presentations to the class. Such presentations may be individual, individually as part of a group or in a panel. Students enjoy learning and hearing from each other, and such activity stimulates positive oral interaction.

## Overhead Transparencies

Overhead transparencies go hand-in-hand with teacher lectures. The use of transparencies is a highly visual and attention-grabbing way to present information. It also can be used over and over again.

## Position Paper

After students have been given access to a variety of opinions related to an issue, it is a valuable strategy to have them write an essay expressing an opinion. The opinion they choose may or may not be their own. However, it should be supported with reasons and facts that build a strong argument for a given point of view.

## Proposal Writing

Once students have completed a unit of study they will be full of ideas about how to change things or solve problems. By dividing students into small work groups and having them design their vision of the future about an issue, everything they have learned can come together in a proposal. While many student proposals will certainly be idealistic, the only way to solve some of the problems of the future related to AIDS will be to aim toward the ideal.

## Question Box

The use of a question box is a valuable tool when teaching any sensitive topic. Some students may be uncomfortable asking questions raised by the topic of discussion. Introducing the anonymous question box at the beginning of a unit will provide a method for those students to have important questions answered without risking embarrassment.

It should be made clear that all questions placed in the box will be taken seriously and will be responded to by the teacher. In some cases, the teacher may have to tell the class he or she does not know the answer to a question, but will do the necessary research and report back to the students.

## Script Writing

Information may be disseminated in a number of ways. One unique way is to have students use factual historical information to write a radio script that can then be presented to the whole class. This technique requires students to become experts regarding their information and helps them develop writing skills.

## Simulation and Role Plays

Simulations and role plays are highly motivating activities for students, because they actively involve students in learning desired concepts. Students act out or act as if they are in a specific situation. Sometimes they are given a part to play, and other times they are given an idea and asked to improvise.

## Teacher Lecture

Another traditional format is the teacher lecture, where information is disseminated directly from teacher to students. Some lessons employ this approach, when we feel it is the best way to impart information. In general, we believe this method should be combined with other methods to insure high-level motivation and learning.

## Worksheets

In some cases students are asked to complete worksheets individually or as a group. This traditional strategy is employed in a few lessons, where students are asked to complete charts or to record information from research or learned from a lesson. Worksheets should be corrected with the whole class immediately upon completion, so feedback is relevant and timely.

# TEACHER RESPONSIBILITIES

AIDS education provides the basis for prevention of AIDS in years to come. No successful vaccination or cure for AIDS has been found, and none may be found for some time. The best hope for prevention is to put accurate and honest information regarding AIDS in the hands of every person who may be a potential victim—and that means everyone.

The foremost responsibility of educators is to understand the district guidelines and policies and state mandates related to teaching AIDS. The laws vary throughout the country and will have an effect on what content may be taught and how it is presented. We believe that AIDS education is best taught as part of a planned, comprehensive school health program.

Teachers also have a responsibility to teach about AIDS in a way that is most sensible and appropriate for students in the grade levels with which they work. As with many sensitive health topics, the teaching of AIDS must be approached carefully. Teachers must understand the maturity level of individual classes and be able to adjust the available material to fit those needs. Some students are experimenting with sex and drugs at early ages. This will vary greatly from school to school and among students within a school. Teachers must be sensitive to the specific needs of their student population regarding the depth and breadth of information presented about AIDS and the prevention of AIDS. Teachers should also make every effort to actively involve parents at every opportunity.

## Setting Classroom Atmosphere

The classroom atmosphere that is established is critical to the success of an AIDS education program. Students must be able to share what they know, or what they think they know, and teachers should attempt to answer all questions that arise. If teachers don't know an answer, they should say so and tell students they will try to find out or assign a student to find out. Some students will be too shy to ask explicit questions, so an anonymous question box should be introduced at the beginning of the unit. (See *Instructional Strategies.*)

Every student's opinion should be valued, even if it is different from another student's. Teachers should clarify guidelines for sharing information and class discussion so that everyone feels equal and as comfortable as possible. This includes allowing students to "pass" when they have been asked a question they don't want to answer.

## Groundrules

These groundrules can assist teachers in establishing a comfortable and open environment for classroom discussion and learning. You may choose to add to or delete from this list depending upon the qualities of individual classes.

- No put-downs.
- Be sensitive to other people's feelings.
- It's all right to "pass" (not answer a question).
- Try to use scientific terms rather than slang. If the student knows only the slang term, the teacher should supply the correct term.
- No one should talk about personal matters or ask personal questions.
- No talking about other students' comments outside of the classroom.
- There are no "dumb" questions. If teachers feel questions are too personal, they may pass.

# PARENT INVOLVEMENT AND SUPPORT

What is taught in the classroom will be more meaningful when supported and discussed at home. Although some parents are more actively involved with their children's education than others, we must make the assumption that the majority of parents are eager and willing to participate and learn.

There are a number of opportunities for teachers to invite parent participation in an AIDS education program. The first point of contact can be a well-organized preview night inviting parents to view and discuss materials to be used. This allows parents to air their fears and teachers to clarify their approach to teaching about AIDS.

This session can be used as a springboard for other parent workshops in AIDS education. It is a good time to ask those in attendance if they are interested in future informative workshops on AIDS, possibly paralleling their children's lessons in the classroom.

Another way to gain and maintain parent support is to create homework assignments for students to complete with parents at home. Incorporating this strategy helps insure that education about AIDS is sensitive to cultural, religious and ethnic norms of families and the larger community. These assignments should be designed to promote parent/child discussions about opinions and values.

Even if parents are unable to participate in any of the ways suggested above, teachers must send an informative letter explaining the program. Legally, whenever teaching explicit or

sensitive material related to family life education, parents' permission must be obtained before children can participate.

If there are students who are not allowed to participate, their parents should be invited to join the teacher and student in designing alternate activities for the duration of the AIDS program. See the **Sample Parent Letter** and **Sample Permission Slips** on the following pages.

# SAMPLE PARENT LETTER

Dear Parents,

On _____, our class will begin an intensive study about Acquired Immune Deficiency Syndrome (AIDS). As you know, AIDS is a deadly disease with no cure. It has reached epidemic proportions, and the only way to successfully prevent its spread is through honest and accurate education.

We would like to encourage you to attend a preview night we have scheduled on _____. On that evening, we will be viewing films and videos on AIDS, sharing the curriculum we will be using and having an open discussion regarding AIDS education.

The curriculum we are using is comprised of 14 lessons dealing with all aspects of AIDS, including how to find accurate information, how to distinguish between facts and myths, diseases in general, epidemics, immune systems, other sexually transmitted diseases, transmission, symptoms and social issues.

We believe this program will be most successful if students have the opportunity to share what they learn and think regarding AIDS with their families. We invite you to become active participants in our AIDS education program by facilitating discussions at home with your children, sharing with them your knowledge and values about AIDS. Please feel free to call if you have any questions regarding this program.

Thanks for your support.

# SAMPLE PERMISSION SLIPS

Two samples of permission slips have been included for use, dependent upon specific district or state requirements. **Sample 1** requires a teacher to have a signed permission slip returned for every student, indicating whether or not the student may participate in the program. **Sample 2** may be used when a district is only legally required to inform parents of the program, and it becomes the responsibility of the parents to inform the school if their child is to be excluded from participation. In the interest of parental support and school-to-home communication, it is strongly suggested that **Sample 1** be used even in cases where **Sample 2** is legally acceptable. The permission slip should be attached to the bottom of the parent letter.

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***Sample 1***

My child, _____, **has my permission** to participate in the AIDS education program. I am interested in attending a preview night for parents on AIDS education. YES_____NO_____

Parent or Guardian Signature_____

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***Sample 2***

My child,_____, **does not have my permission** to participate in the AIDS education program. I agree to meet with my child's teacher to design an alternate course of study for the duration of the program.

Parent or Guardian Signature_____

# EVALUATIVE METHODS

## Individual Lesson Evaluations

Each lesson provides the teacher with one or more methods for evaluating student performance on stated objectives. The methods are listed following the procedure of each lesson. Methods include collection and analysis of worksheets, scripts or other written materials, observation of individual or group presentations of facts, observation of dramatic presentations and student self-evaluations (described below).

## Student Self-Evaluations

*How well did I participate?* Before giving the students a copy of the **"I Learned..." Evaluation Record Sheet**, brainstorm and discuss ways they can help the success of learning in the classroom. Build a list of criteria for being a successful student, including the ones listed on the Participation/Learning Record. Guide the students in ranking themselves by circling the appropriate number. Have them discuss how they ranked themselves with their cooperative learning groups when appropriate.

*What did I learn?* Calling for "I learned" statements at the end of the period is a great way to sum up the activity. When introducing the **"I Learned..." Evaluation Record Sheet**, call for suggestions. Write at least three statements on the board. Students may copy one of the statements or make up their own.

Encourage students to write a fact. Discourage them from using the word "about," because what follows that term is too general. "Today I learned that AIDS is not transmitted by

mosquitoes" is acceptable; "Today I learned about AIDS" is not. "I learned nothing" is *not* acceptable. Make students responsible for learning. Direct them to material to read until they learn something to record.

The teacher may change the evaluation statement to a question: "My question for the public health nurse is, 'How many cases of AIDS have we had in our county since they started recording?'" Another evaluative statement could be a position statement: "I believe that testing for HIV should be confidential so people won't be afraid to be tested." See Appendixes for sample **"I Learned..." Evaluation Record Sheet**.

*I need to talk to the teacher.* Using the comments on the last part of the evaluation form becomes a good way to communicate with the students. Encourage them to write about any personal successes or problems they want noted.

*AIDS Pre-Post Assessment.* Based on district guidelines and teacher discretion, this student test can be used to assess student understanding of basic AIDS content. See Appendixes for sample **AIDS Pre-Post Test**.

LESSON 1

# WHAT WE THINK WE KNOW

## Objective

Students will be able to describe why it is important to learn about AIDS.

## Time

One 50-minute period

## Overview

When starting any unit of study, a teacher needs to survey the students to see how much information they already have. Often a pretest or an inventory is given. It is most important in the area of AIDS education for the teacher to know what fears, myths and misinformation the students hold. The teacher will then be sure to give correct and up-to-date information to dispel misconceptions.

This lesson initiates the AIDS unit by asking students to tell everything they think they know about AIDS. The second step is to generate questions to direct research and study. Finally, students read newspaper articles to substantiate some of the brainstorm

statements and to answer generated questions. Both brainstorm lists of statements and questions are to be used as a point of reference throughout the unit.

## Instructional Strategies

Brainstorming, reading, cooperative learning groups.

## Teacher Materials and Preparation

**HAVE:**

✓ Large newsprint pads or rolls of butcher paper, masking tape or tacks for displaying brainstorm lists.

✓ Hi-liters and more AIDS articles. (optional)

**MAKE:**

✓ Poster of challenge questions:

*Is that fact or opinion?*
*Why do you hold that opinion?*
*How do you know you know that?*
*Where did you get your information?*
*Why is that (resource) an expert?*

**COLLECT:**

✓ AIDS news articles from magazines, newspapers and student publications. Articles must include name of newspaper and date of publication. Ask parents to look for and save articles for you at parent preview night.

**COPY:**

✓ Select one simple (single column, 4 or 5 inches) AIDS newspaper article or use **Sample Article**. Make copies for each student.

✓ **"I Learned" Evaluation Record Sheet** from the appendix.

## Procedure

■ Set the stage for the AIDS unit of study. Point out to students that the topic of AIDS has been in the news media for some time. Write the letters A-I-D-S on the board and ask for volunteers to help determine what the letters stand for: **a**cquired **i**mmuno**d**eficiency **s**yndrome. Encourage students to report what they have heard and seen recently. Assure them they probably know a great deal about the topic and before you begin study you want to know what they think they know.

■ Record student responses on large sheets of paper titled *"Everything we think we know about AIDS"* and have students brainstorm questions. (See procedure for brainstorming in Instructional Strategies section of the Introduction.)

Explore with students the differences between fact, opinion and myth.

- Fact: *Any statement strictly true.*
- Opinion: *A conclusion or judgment held with confidence, but falling short of positive knowledge. (Some opinions have a factual basis; most have an emotional origin.)*
- Myth: *Popular fable or folk tale (synonyms under fiction).*

Point out that many statements on the brainstorm chart are probably opinion. Display the poster of challenge questions and model challenging by asking the questions where appropriate:

Is that fact or opinion?
Why do you hold that opinion?
How do you know that?
Where did you get your information?
Why is that (resource) an expert?

Older and more advanced students will be able to challenge statements for accuracy and fact. Identify questionable statements with a question mark for later verification.

■ Tell students that their brainstorm list of "What they think they know about AIDS" is just a beginning. Explain that in order to be well-informed about the topic they will be developing a list of questions to guide their research. You may need to explain the concept of *scientific research.*

First the problem needs to be identified or the question formed. In this case your question is *"What are the facts about AIDS?"*

Secondly, information needs to be gathered. Remind students that scientists often go into the field to study the actual object. They may also use a laboratory. They talk to experts or read about their findings.

Thirdly, the scientific process involves forming and testing the hypotheses (educated guesses), drawing conclusions and developing theory and law. These have all been part of AIDS research.

■ Help students generate *"Questions to guide research."* List questions on large sheets of paper to keep on display during unit. Add other questions to supplement student list.

Be sure your list includes:

- What does A.I.D.S. stand for?
- How can AIDS be caught?
- How can AIDS be prevented?
- How can AIDS be treated?
- How can a person tell he/she has AIDS?
- Do people always die from AIDS?
- Could a person get AIDS from being near a person with AIDS?
- How many people have AIDS?
- How many have died from AIDS?

Conclude this activity by explaining that the list of questions will remain on display throughout study of topic. Students are to add any new questions they think of during the study.

■ Give each student a copy of the newspaper article you selected or use the **Sample Article** provided. Select students to read one paragraph at a time aloud to the class. Look at the brainstorm lists of questions and statements to see which are addressed in this article. Help students see that the first sentence of the article has the main idea and that the following sentences support that idea. Guide them to underline the most important facts with their pencils, or hi-liters if available.

■ Put indicators (such as check marks) next to substantiated (or verified) brainstorm statements and answered questions. List resource (newspaper name and date of publication) by each statement to give credibility to information. Repeat this process throughout study of AIDS. Conclude by asking for and listing any additional questions the students may have.

## Evaluation

Students will write an "I learned" statement and rank themselves on their level of cooperation and participation. Students may use the **"I Learned" Evaluation Record Sheet** in the appendix.

## Follow-up Extension

It may be helpful to rewrite the brainstorm statements in categorical groups, eliminating repetitive statements. This is a good process for mature students and can be assigned for extra credit.

Bring newspapers and T.V. schedules to class. Assign a few students to cut out and post relevant items on classroom bulletin board.

## Alternative Strategy for More Advanced Students

At the conclusion of brainstorming questions, arrange students in cooperative learning groups of three. Have enough articles for each group to use a different article.

Assign each group member a task: reader, recorder and reporter. Have them read article to determine the main points. Recorder should hi-lite these. Reporter should report back to the group. Class will decide which items on the brainstorm lists of statements and questions the article addresses.

# Sample Article

Wednesday, March 23, 1988 Santa Cruz Sentinel - A-7

## AIDS claims 259 victims in February

SACRAMENTO (AP) - There were 259 AIDS deaths and 278 new cases reported in California in February, the state Department of Health Services said Tuesday.

Those figures brought the state's cumulative totals since 1981, when the first acquired immune deficiency syndrome cases were tallied, to 11,994 cases resulting so far in 6,647 deaths.

The report said through Feb. 29, Los Angeles County has had 4,437 AIDS cases resulting in 2,768 deaths, and San Francisco has had 3,813 cases resulting in 1,897 deaths.

The state report said the number of new cases was up 2.4 percent over January, and that the largest rate of increase, 6 percent, was among adult and adolescent women.

The largest percentage increases in February were in Napa and Humboldt counties, each up 50 percent from 16 to 24 in Napa County and from six to nine in Humboldt County, the report said.

A statistical summary in the report also contrasted California's cases with the rest of the nation's.

"The most striking contrast is seen among intravenous drug users. This patient group accounts for only 3 percent of all cases reported in California, but over 21 percent of cases reported in other states," the report noted.

"Similarly, individuals at risk for AIDS due to heterosexual contact account for just 1 percent of California cases, while they represent nearly 5 percent of all cases reported in the remaining states. These figures largely explain why 91 percent of all cases in California involve gay or bisexual men compared to 67 percent in other states."

Reprinted with permission from The Associated Press. New York: AP Newsfeatures.

LESSON 2

# AIDS IN THE NEWS

## Objectives

Students will be able to classify information about AIDS according to specific criteria.
Students will be able to explain the importance of newspapers in keeping them informed about critical issues.

## Time

One 50-minute period

## Overview

To participate successfully in a democratic society, citizens must be able to recognize, analyze and offer solutions to the critical issues at hand. If students are to become and keep themselves informed about the AIDS epidemic, they must have access to the daily changes in information. Therefore, they must become proficient readers of the press.

This lesson lays the groundwork for future research on AIDS using

newspapers. Groups of students are asked to read teacher-selected articles, analyze their content and classify them according to predetermined categories. Students will place their articles in categories on a prearranged bulletin board. Groups will be assigned current events responsibilities on a rotating basis for the duration of the unit.

## Instructional Strategies

Cooperative learning groups, oral presentations, worksheets.

## Teacher Materials and Preparation

**MAKE:**

✓ Prepare a current events bulletin board using labels for each of the seven categories recommended:

| | |
|---|---|
| Statistics | Civil Rights |
| Economics | Research and New Developments |
| Government | Health |
| People | |

As necessary, combine, alter or create new categories that are appropriate for students' ability level.

**COPY:**

✓ Make copies of the **Descriptions of News Categories** sheets for each student. (If you choose to change the categories, be sure to create new descriptions of your categories.)

✓ Make one copy per group of the **Newspaper Articles Worksheet.** (Adjust worksheet to match the number of categories you choose.)

**REVIEW:**

✓ Familiarize yourself with the **Descriptions of News Categories** sheet.

**FIND:**

✓ Collect AIDS articles from newspapers, *Scholastic Magazine* or other student magazines. Try to find one article to match each

of the categories you choose.

## Procedure

■ Ask the class how it is possible for them to keep up with all the new information being put forth about AIDS. Their answers may include watching the news on television, talking to people who know and reading newspapers. Tell them how important it is to be informed about critical issues. Explain that effective solutions can only be offered if people stay informed.

■ Direct students' attention to the bulletin board displaying the categories you have chosen. Tell them they will be learning to use newspaper articles to help themselves stay informed. Distribute copies of the **Descriptions of News Categories** to each student. Have volunteers read the titles and descriptions of each category. Give students the opportunity to discuss or ask questions about the categories.

■ Divide the class into seven groups (or one for each category). Tell them you will be giving each group one newspaper article. Discuss their responsibilities as a group and write them on the board:

1. Read the article.
2. Decide in which category the article belongs.
3. Say why the article belongs in the category.
4. Fill out a group worksheet for the article.
5. Be prepared to report to the class.

■ Distribute one article and one group worksheet to each group. Discuss the worksheet example with the students until you are sure they understand. Ask the groups to assign responsibilities to each member. These responsibilities can include readers, recorder, discussion leaders and reporters.

■ Tell the groups they will each be starting with a different article representing a different category. After all groups have finished their articles, rotate the articles so each group has a new one. Continue with this process until all groups have seen all articles. Tell students to rotate the responsibilities within the group as well.

■ When all groups have seen all articles and completed their worksheets, ask for volunteers to report on their group's results. Have students explain why their group chose a certain category for an article. (Remember, it is possible for articles to overlap and fit into more than one category.) Have one group member pin the article to the bulletin board under the appropriate category and explain how newspapers help keep us informed about critical issues.

■ Tell students their groups will take turns being responsible for keeping current on AIDS information. Use a random method to determine the order of groups, then put the list on the bulletin board. (For this ongoing process to be successful you should not assume that all students have access to newspapers at home, but should supply one in the classroom or library.)

## Evaluation:

Teacher observation of student reports on choices of categories and evaluation of group worksheets to determine student understanding of categorizing news articles.

Teacher observation of students' ability to explain the value of reading the newspaper.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

The process by which AIDS updates are shared in class by groups should be determined before this lesson is introduced. This process will vary depending upon the nature of the class and the constraints on weekly and daily schedules. Time can either be allocated on a daily or weekly basis. If reports are given once a week, 30 minutes will be needed to accommodate all groups.

If the schedule is more flexible, each group could be allowed five minutes a day to present an update to the class. This could be the opening for the day or the finale just before class is dismissed.

STUDENT

# DESCRIPTIONS OF NEWS CATEGORIES

News articles about AIDS can usually be classified under more than one of the following categories. Decide which category you think is most appropriate by using these descriptions. Look at key words in headlines to help you make decisions.

## Statistics

Many articles focus on updates of local, state or national statistics. These can be based on organized polls, informal estimates or regular Centers for Disease Control (CDC) reports.

## Civil Rights

AIDS articles will quite often focus on problems raised by AIDS-related issues. When these problems deal with individual rights or discrimination in areas such as employment, housing, mandatory testing, etc.—then they belong in this category.

## Economics

Any articles having to do with money will fit here. These can range from local fundraisers to the federal AIDS budget.

## Research and New Developments

Scientists and doctors all over the world are studying the causes and effects of AIDS. Development of new drugs for treatment or prevention will fit here, as will a variety of other studies being conducted with persons with the AIDS virus.

## Government

As the problems related to AIDS intensify, all levels of government are becoming more actively involved. Local school boards are making policy regarding curriculum, and state legislatures are considering mandatory testing and more funds for AIDS research. Whenever people are making legal decisions for others regarding AIDS, the articles belong in this category.

**People**

Some articles are simply special interest or feature stores focusing on the individual lives of persons with AIDS. When the main thrust is to highlight people, the articles belong here.

**Health**

There may be some articles that fit best under a larger category called health. One example would be an article suggesting a diet for persons with AIDS that would be better for their immune systems.

STUDENT

# NEWSPAPER ARTICLES WORKSHEET

**Names of Group Members:** _____

_____

_____

**EXAMPLE** **Recorder's Name** Jeff

**Title:** Babies with AIDS on the Rise

**Category:** People or Health

**Reason:** This article could be put under Health because it is talking about babies getting AIDS. This could also be put under People because it focuses on babies.

**ARTICLE 1** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

**ARTICLE 2** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

STUDENT

**ARTICLE 3** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

---

**ARTICLE 4** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

---

**ARTICLE 5** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

STUDENT

**ARTICLE 6** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

---

**ARTICLE 7** **Recorder's Name** _____

**Title:** _____

**Category:** _____

**Reason:** _____

_____

_____

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LESSON 3

# USING OUR EXPERTS

## Objective

Students will describe how to utilize experts to find accurate information about AIDS.

## Time

One 50-minute period for preparation
One 50-minute period for interview

## Overview

When doing research on issues, there usually comes a time when more than just written materials are needed. Questions may have been generated which can't be answered simply by reading. This is certainly the case when pursuing the facts about AIDS. That's when we must learn how to use human resources.

This lesson is designed to have students create questions they will then ask of a guest expert on AIDS.

## Instructional Strategies

Interviewing, cooperative learning groups, worksheet.

## Teacher Materials and Preparation

**COPY:**

✓ Make copies of the **Questions for the Expert** worksheet.

**REVIEW:**

✓ Use the **AIDS Information Sources** to determine what kinds of people you could invite to visit your class to talk about AIDS.

**CONTACT OR FIND:**

✓ Contact a local "expert" on AIDS. If you can't find someone who is really an expert, try a doctor, a nurse or other health worker who should be fairly well informed. Arrange a time for the guest to visit your class to talk to students about AIDS. Have your expert prepare a 15-minute presentation, and tell him/her that students will follow up with questions.

## Procedure

■ A few days before your guest visits, tell students you have arranged for an AIDS expert to talk to them about AIDS. This will be their chance to get answers to their questions about AIDS. Tell students they will each be asking the expert at least one question.

■ Discuss with students how to go about creating good questions to ask the expert. (If you have done Lesson 1 or 2, a number of questions have already been formulated that students can use.) Remind them of the different kinds of information they can seek: who, what, where, when, why and how. Give the students one example: Where did the AIDS virus come from? Ask volunteers to suggest examples for the other five types of questions. Remind students that good questions should be open-ended, not answerable by a simple yes or no.

■ Distribute copies of the **Questions for the Expert** worksheet to students. Working in groups of two or three, have students think of ten questions to ask the expert and write them on their worksheets.

■ When all groups have completed their ten questions, ask for volunteers to share one from each group. Write the questions on the board or on butcher paper. If students have similar questions on their worksheets, have them put a check next to those questions to avoid duplicates.

■ Continue taking questions from volunteers until there are no new questions. If the class has not yet generated as many questions as there are students, continue the discussion. When there are enough questions, assign one to each student. Have students write their assigned questions at the bottom of their worksheets.

## Evaluation

Teacher assessment of student worksheets for quality of questions posed.

Teacher observation of student participation in the question-answer period of the interview.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Have students write letters to the expert in appreciation of the visit, mentioning something they learned from the interview.

Make an audio tape or write a letter with appropriate questions to send to other AIDS experts.

# QUESTIONS FOR THE EXPERT

Develop ten questions to ask the AIDS expert and fill in the following spaces. Indicate whether the question is a who, what, where, why, when or how type question.

**Sample Question:** *Can you catch AIDS by drinking from the same glass as a person who is infected with AIDS?* **Type:** *How*

**Question #1:** _____

_____ **Type:** _____

**Question #2:** _____

_____ **Type:** _____

**Question #3:** _____

_____ **Type:** _____

**Question #4:** _____

_____ **Type:** _____

**Question #5:** _____

_____ **Type:** _____

**Question #6:** _____

_____ **Type:** _____

**Question #7:** _____

_____ **Type:** _____

**Question #8:** _____

_____ **Type:** _____

**Question #9:** _____

_____ **Type:** _____

**Question #10:** _____

_____ **Type:** _____

**My question for the expert:** _____

_____

# AIDS Information Sources

The network of AIDS information and service resources is large. There are organizations or agencies responsible for coordinating AIDS services in every state. The national information number, listed below, maintains up-to-date listings of local resources throughout the country. Not all of these organizations have information hotlines.

Be sure to check any numbers or addresses before giving them to students—they have a tendency to change fairly often.

## HOTLINES

National AIDS Hotline
(800) 342-AIDS—Toll-free
(202) 245-6867—Collect from Alaska and Hawaii
Administered by the American Social Health Association

National Gay Task Force
AIDS Information Hotline
(800) 221-7044
(212) 807-6016 (NY State)

STD National Hotline
(800) 227-8922
Administered by the American Social Health Association

## WRITTEN RESOURCES: PAMPHLETS, BROCHURES, POSTERS

Call or write for description of materials and price list. Some of these agencies will also provide speakers for school assemblies, consultation for teachers or education for parents.

<u>California</u>
AIDS Project, Los Angeles
1362 Santa Monica Blvd.
Los Angeles, CA 90046
(213) 876-AIDS

Network Publications
A Division of ETR Associates
P.O. Box 1830
Santa Cruz, CA 95061-1830
(408) 438-4080

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**California, continued**
San Francisco AIDS Foundation
333 Valencia Street
San Francisco, CA 94103
(415) 863-2437

**Maryland**
Health Education and Resource Organization (HERO)
101 W. Read St., Suite 812
Baltimore, MD 21201
(301) 685-1180

**Massachusetts**
AIDS Action Committee
661 Boylston St.
Boston, MA 02116
(617) 536-7733

**New York**
Gay Men's Health Crisis, Inc.
132 W. 24th St.
New York, NY 10011
(212) 807-6655

Hispanic AIDS Forum
140 W. 22nd St., Suite 301
New York, NY 10011
(212) 463-8264

**North Carolina**
American Social Health Association
P.O. Box 13827
Research Triangle Park, NC 27709
(919) 361-2742

**Washington, DC**
American Red Cross
AIDS Education Office
1730 D St., NW
Washington, DC 20006
(202) 737-8300
or contact local Red Cross

National AIDS Network
1012 14th St. NW, Suite 601
Washington, DC 20005
(202) 347-0390

U.S. Public Health Service
Public Affairs Office
Hubert H. Humphrey Building
Room 725-H
200 Independence Ave., SW
Washington, DC 20201
(202) 245-6867

LESSON 4

# INFORMATION VERIFICATION

*For students with grade level reading ability and library experience.*

## Objective

Students will be able to analyze the credibility and accuracy of information about AIDS.

## Time

One 50-minute period

## Overview

Many students will feel their opinions are facts. When myths or misinformation are believed, it is very hard to promote factual information. It is important for the teacher to set up an environment that promotes sound factual education.

In this lesson the students back up their brainstorm statements from Lesson 1 with facts from credible resources, using critical thinking skills, and find answers for generated research questions. Misinformation is replaced with substantiated facts.

## Instructional Strategies

Cooperative learning, research, critical thinking.

## Teacher Materials and Preparation

**HAVE:**

✓ Brainstorm list of statements and generated questions from Lesson 1 displayed in class. Sheets of newsprint, markers, resources on AIDS: books, newspapers, magazines, student publications, pamphlets and experts (as suggested in Lesson 3).

**COPY:**

✓ Make enough copies of the **Information Verification Form**—cut into half-sheets—for each student to have 3-5 forms.

## Procedure

■ Tell the students they will continue to look for factual material to prove their brainstorm statements and to answer their research questions. They will read material to find answers.When they find an answer they will fill out an **Information Verification Form** by writing the question on the question line and the answer on the lines provided. Tell them to fill in the required information on the resource they use. Explain that bibliographical information is required in research:

- so that others can locate and check your information and
- to prove the credibility of your information.

■ Give each student a form. Take them through the process step by step using one of their questions and one of the resources available to them. As the "Research Questions" are answered, place a star by each question as a signal that it has been answered.

■ Explain to students that this project is like playing the T.V. quiz show "Jeopardy." "Here is an answer, now what is the question?" In some cases students will find good information for which no question is on the list of research questions. They may then develop a question for which the material provides an answer. Also have them use materials to prove or disprove statements from the

brainstorm list of statements. The question then becomes, "Is it true that...?"

■ Arrange students into cooperative learning groups of 3-4. Assign roles of 1 or 2 readers, a recorder and a reporter. Give each group some of the research materials. Have students find as many answers as possible in the remaining class time.

*Teacher Note*: For younger or less advanced students, take them through each step as a full class as described earlier.

■ Place verification forms near the list of brainstorm statements and generated questions. As students answer questions and prove statements, have them star questions and statements with colored felt pens on the displayed lists.

■ If a statement from the brainstorm list is proven to be untrue, have students write with felt pen on statement, "UNTRUE."

■ Have sheets of large paper ready for additional questions. As students learn more about AIDS they will naturally know to ask more questions.

■ Conclude lesson by having student cooperative groups report their findings to the class. Focus on unanswered questions. Discuss how these questions will be answered. Explain to students that scientific research often starts with someone's unanswered questions. This class's study of AIDS may end with several unanswered and unanswerable questions.

## Evaluation

Teachers will check verification forms to determine student success in analyzing information about AIDS.

Students will write "I learned" statements and rank themselves on their level of cooperation and participation.

## Follow-up/ Extension

If the teacher chooses to make individual research assignments, the verification form can become a very structured assignment.

Assemble completed verification forms into a packet entitled "Our Book of AIDS Facts." This may be a resource for other classes studying AIDS.

STUDENT

## Information Verification Form

NAME_____
DATE_____

Source: Title_____

Author_____ Publisher_____

Date_____ Vol._____ Pages_____

*Circle One*: Book Encyclopedia Magazine Newspaper

Pamphlet Resource Person Other

QUESTION:_____

_____

ANSWER:_____

_____


## Information Verification Form

NAME_____
DATE_____

Source: Title_____

Author_____ Publisher_____

Date_____ Vol._____ Pages_____

*Circle One*: Book Encyclopedia Magazine Newspaper

Pamphlet Resource Person Other

QUESTION:_____

_____

ANSWER:_____

_____

LESSON 5

# EPIDEMICS: A PEEK AT THE PAST

## Objective

Students will be able to demonstrate the impact of a specific epidemic on individuals and society.

## Time

One 50-minute period

## Overview

It is important for students to understand that AIDS is an epidemic that is rapidly spreading throughout the United States and other countries. This lesson will provide the background information necessary for a general understanding of epidemics: what they are, how they develop and how they are stopped.

Students listen to a role-play script depicting an interview between an announcer and an epidemiologist who will give them some general information about epidemics. In small groups students study a historical epidemic, develop a skit and give a dramatic presentation to the class.

## Instructional Strategies

Cooperative learning groups, script writing, dramatic presentations, brainstorming.

## Teacher Material and Preparation

**MAKE:**

✓ (optional) Build a time machine out of cardboard or other inexpensive materials to use in the class simulations of going back in time.

**COPY:**

✓ Make copies of the **Epidemic Fact Sheets** so that each group member has a copy of the group's assigned epidemic.

**OBTAIN:**

✓ Place a world map on the wall prior to the lesson so groups can indicate the world location of their epidemic.

**REVIEW:**

✓ Familiarize yourself with the **DJ's Script**. Select a student volunteer prior to the lesson so he or she can practice reading the script.

✓ Familiarize yourself with the information provided in the **Epidemic Fact Sheets** before you lead the summary discussions following presentations.

## Procedure

■ Begin the lesson by having the preselected volunteer assist in reading the role-play script between the announcer (the teacher) and the epidemiologist. Following the reading of the script, call on students to share something they learned about epidemics or questions that may have been raised.

■ Assign students to six cooperative learning groups, giving each group a specific epidemic to study. Distribute an **Epidemic Fact Sheet** about the assigned disease to each group member. Tell students their task is to read the background information and develop a brief television broadcast concerning their epidemic. They should simulate the time and place of the epidemic, using reporters,

eyewitnesses, experts, victims and anyone else who would make their broadcast seem authentic and interesting. They should use the world map to show the audience the location of their epidemic.

■ Allow the groups 20-25 minutes to develop their skits. When all groups are ready, assume the role of announcer once again, either reading from the established script or improvising. Call on the groups to give their presentations.

When groups have finished their presentations, have students brainstorm what they have learned about epidemics, including epidemics in general and facts about specific epidemics.

## Evaluation

Teacher observation of student performance in demonstrating an understanding of the impact of specific epidemics.

Teacher observation of student responses in the brainstorming session to check for more general conceptualization of epidemics.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Have students contact a local epidemiologist or public health nurse to find out more about epidemics in their area.

Discuss related terms such as *pandemic* and *endemic.*

# DJ's SCRIPT

DJ: Welcome to KEPI's special broadcast, "Epidemics: A Peek at the Past." Before we begin our journey back through time, I'd like to introduce Dr. Ima D. Zees, noted expert on diseases and epidemics. Welcome, Dr. Zees.

Dr.: Thank you very much. It's a pleasure to be here.

DJ: Now, Dr. Zees, just how exactly do you define an epidemic?

Dr.: An epidemic is an illness or disease that occurs in higher numbers than is expected.

DJ: I see. Does everyone get sick in an epidemic?

Dr.: No.

DJ: That's very interesting. Are all epidemics fatal?

Dr.: Generally, epidemics are fatal because they deal with a disease that kills people.

DJ: And how are epidemics stopped?

Dr.: Well, that depends on the disease. Polio was stopped when a vaccine was discovered. Some epidemics can be prevented by cleanliness and good sanitation. So far, there's no stop to the AIDS epidemic.

DJ: Well, thanks so much for being with us today, Dr. Ima D. Zees. We'll return to Part 2 of "Epidemics: A Peek at the Past" following this brief message.

*(Assign students to their groups on specific epidemics and give them 25-30 minutes to complete their skits.)*

DJ: And now I'll turn on the KEPI time machine to take us to our first blast in the past.

*(The first group, in chronological order, will give their presentation. Repeat this sequence for all six groups.)*

DJ: Thank you all for joining us today on KEPI for today's special broadcast on epidemics.

# EPIDEMIC FACT SHEET 1

## *The Bubonic Plague in Europe*

Epidemics were common in the Middle Ages, occurring about every 25 years or so. The worst plague ever recorded in Europe was The Great Plague of 1348-1349. This was also called "The Black Death." There was a very high death rate. About 25 million people died, which was about one-fourth of the total population.

Everything stopped during the epidemic. Trade stopped, people produced very little food, the courts stopped meeting and there was no policing of crimes.

Bubonic plague was easily transmitted. People contracted it from the bites of fleas who had gotten the infection from infected rats. It was a very painful disease that killed people in one to three days from the time they were bitten by the flea.

Living conditions in the cities were crowded and unsanitary; rats and fleas flourished. Many people were infected and the disease spread rapidly. Almost everyone who got the disease died. There was no treatment and no cure.

People did not know how the disease was caused. They were afraid of catching it from those already infected, so the sick were often abandoned to die alone.

No one wanted the disease. They prayed to God to protect them. Some worshiped the devil and wore amulets or charms. Some tried to ward off the disease by chanting incantations or using a magic word, "Abracadabra." It was hoped that burning incense or leaves or burning things that filled the air with foul smells was a preventative. Some people stopped bathing, others stopped having sex. Some people believed the night air was poisonous. Some doctors recommended drinking or washing with goat urine.

In many communities in Europe, Jews were blamed for causing or deliberately spreading the plague. They were accused of poisoning wells and planning the destruction of the Christian population, even though Jews were dying of the plague as much as Christians. Mass persecutions of Jews were common. Hundreds of thousands of Jews were massacred throughout Europe during these times. When the plague ended, so did the persecutions.

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Adapted from *Teaching AIDS*, revised ed., Network Publications, a division of ETR Associates, 1988, Santa Cruz, California.

STUDENT

# EPIDEMIC FACT SHEET 2

## *The Bubonic Plague in San Francisco, California*

Bubonic plague appeared in San Francisco in 1900. A Chinese man was the first to be diagnosed with the disease. Most other cases were among the Chinese. The San Francisco Board of Health believed Chinatown was a source of the disease because of "unwholesome odors."

The Chinese were blamed for the disease, and the city, state and federal authorities took action; Chinatown residents were placed in quarantine.

No changes were made in the poverty or overcrowded conditions in Chinatown. The city did not even provide health care to the quarantined people of Chinatown.

Chinese and Japanese could not leave California without a federally-issued medical certificate. Detention camps for San Francisco's 14,000 Chinese residents began to be prepared.

The state Board of Health recommended that Chinatown be demolished and saturated with chloride of lime and carbolic acid. The 1906 earthquake destroyed Chinatown before the plan could be carried out.

Another outbreak of the plague occurred in 1907 in San Francisco. This time few of the sick were Chinese, most were white. The Board of Health carried out a citywide program for killing infected rats and their disease-bearing fleas. The disease was stopped.

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Adapted from *Teaching AIDS*, revised ed., Network Publications, a division of ETR Associates, 1988, Santa Cruz, California.

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# EPIDEMIC FACT SHEET 3

## *United States - STDs in Teenagers*

Sexually transmitted diseases, also called STDs, or sometimes VD, are usually passed from person to person during intimate sexual contact. Currently, teenagers (and young adults) are at risk in an epidemic of STDs.

One in seven teenagers currently has an STD. Eighty-five percent of all reported cases of STDs are in people 15-30 years old.

The most common of the sexually transmitted diseases is gonorrhea. It is estimated that well over 1,000,000 people in the United States have gonorrhea today. Gonorrhea can cause death in rare cases. It can cause sterility (not being able to have children) in both males and females. If a mother has gonorrhea when she gives birth, it may get into her baby's eyes and cause an infection that could lead to blindness.

Gonorrhea can be treated with penicillin. The symptoms are different in males and females. In males, urethritis often occurs so a male feels pain inside his penis when he urinates. He may also have a watery dripping from his penis that becomes white to green-yellow in color. About 80 percent of females have no symptoms. A female can have a discharge from her vagina that may spread bacteria into her urinary tract. Like the male, she may have a burning feeling when she urinates.

Doctors and health clinics can diagnose gonorrhea with a simple laboratory test. Treatment must begin immediately if gonorrhea is diagnosed. Sexual partners need to be informed so they can be tested and treated.

Laws regarding medical treatment of STDs vary from state to state. In California, anyone 13 or older can be confidentially diagnosed and treated for STDs without parental consent.

STDs can be prevented by abstaining (not having) from sex altogether. It is important to abstain from sex when one partner is infected with an STD. Limiting the number of partners a person has sex with also decreases a person's risk. Proper use of a condom (rubber) can prevent transmission of gonorrhea and other STDs.

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Adapted from *Teaching AIDS*, revised ed., Network Publications, a division of ETR Associates, 1988, Santa Cruz, California.

# EPIDEMIC FACT SHEET 4

*Yellow Fever*

Yellow fever has caused many deaths throughout recorded history. Some of the recorded epidemics are:

**1699 -** In Charleston, South Carolina, and in Philadelphia nearly one-sixth of the population dies.
**1741 -** 10,000 die in Cadiz, Spain.
**1793 -** During the worst epidemic in any U.S. city up to this time, 5,000 die in Philadelphia.
**1798 -** in New York City 2,086 deaths.
**1800 -** 80,000 deaths in Spain.
**1802 -** 29,000 of Napoleon's soldiers die in the Dominican Republic.
**1810 -** 25,000 deaths in Spain.

Yellow fever is a violent disease caused by a virus transmitted by the bite of a mosquito. It has a sudden onset with fever, headache, backache, exhaustion of the body, nausea and vomiting. The death rate can be as low as 5 percent with lifetime immunity for survivors. During epidemics the death rate can be as high as 50 percent.

In 1902 Army Surgeon W.C. Gorgas was able to control an epidemic of yellow fever in Havana, Cuba, by killing mosquitoes and destroying the breeding area. He was able to do the same in Panama two years later. Construction of the Panama Canal was then started.

Today immunization is available for people going into areas of possible infection. Vaccination will last up to 17 years. There have been only a few cases in the Americas since 1942 (some in Trinidad, West Indies, in 1954). Cases are still reported in parts of Africa near rain forests.

STUDENT

# EPIDEMIC FACT SHEET 5

***Smallpox***

Smallpox has caused many deaths throughout recorded history. Some of the recorded epidemics and important developments in treatment are:

**1616** - Kills almost all of the Indians in New England.
**1667** - Spreads throughout Virginia.
**1697** - Spreads to Charleston, South Carolina.
**1713** - Outbreak reported in Cape Colony, South Africa.
**1740** - Berlin, Germany reports an outbreak.
**1800** - First vaccination in America given by the inventor to his son.
**1802** - James Smith, a Maryland physician, opens a clinic that gives free smallpox vaccinations to the poor.
**1853** - Vaccination against smallpox is made compulsory in England.

This serious disease is presently under control because of the worldwide use of vaccine. Though now in control, in the past the disease has caused much death and disfiguration.

This infectious and highly contagious disease is caused by a virus. The disease comes on very quickly and is accompanied by a very high fever, headache and a severe backache followed by deep eruptions on the skin. Fatality rates of 5-15 percent were generally experienced.

The disease was generally transmitted by close contact with the infected person, including contact with respiratory discharges or sores on the skin or materials contaminated by the victim. Airborne spread did not often occur. Household, school and hospital association with infected people offered great risks.

Victims were usually put into quarantine, as were all members of their family and others they had had contact with. Daily inspections of these quarantined people were made for 17 days for signs of the disease.

Permanent immunity for people who lived through the disease occurred; very few people had it a second time. This was the important clue that led scientists to search for a vaccine.

# EPIDEMIC FACT SHEET 6

*Polio*

Infantile paralysis (poliomyelitis), has been a problem since early times. Human remains from 3700 B.C. indicate the disease. Some of the recorded epidemics and important developments in treatment are:

**1916** - 27,000 U.S. cases.
**1943** - 1,151 deaths, thousands paralyzed.
**1952** - 58,000 U.S. cases.
**1954** - Dr. Jonas Salk develops vaccine.
**1955** - August 12, U.S. Congress passed the Poliomyelitis Vaccination Act; enough money made available so all children could be vaccinated.
**1955** - Albert Sabin develops oral vaccine.
**1957** - 6,000 U.S. cases.

In 1907 poliomyelitis (polio) was confirmed to be an infectious disease by Otto Ivar Wickman (German). Several mild epidemics were noted in colonial times, but the disease was not known to the general public until 1916. During that year in New York City alone, 9,000 children were infected, of these 2,000 died.

Polio occurred worldwide before large-scale immunization programs were carried out. During 1971-1978 a yearly average of only 15 cases were reported in the United States, 9.6 in the United Kingdom, 2.8 in Canada.

An infection that is caused by a virus quickly becomes severe. Symptoms range from unapparent signs to fever to paralysis and possibly death.

The virus multiplies in the alimentary tract (between mouth and anus). It invades the central nervous system and attacks motor cells, resulting in paralysis. This leaves the infected body part limp, most often the lower part of the body. Paralysis of muscles for breathing and swallowing may threaten life.

The disease is transmitted by direct contact. In a few cases foods and other fecally contaminated materials have been discovered to be the sources of transmission. There is no reliable evidence of spread by insects or virus-contaminated sewage, and water is seldom involved. Where sanitation is good, discharge from the throat becomes the major mode of transmission. The virus is more easily detectable for a longer period in feces than in throat secretions.

LESSON 6

# CHARACTERISTICS OF DISEASES

## Objective

Students will be able to differentiate among various characteristics of disease.

## Time

One 50-minute period

## Overview

To meaningfully understand the implications of AIDS as a disease, students must have some background on the nature of diseases in general. They should be able to compare the similarities and differences of diseases, and make predictions and interpretations about those diseases.

In this lesson students are introduced to communicable disease through a discussion of chicken pox. After the teacher demonstrates how to outline the facts about chicken pox on a wall chart, small groups of students study other diseases, report back to the class and record information on a master chart.

## Instructional Strategies

Cooperative learning groups, research, worksheets, oral presentations, brainstorming.

## Teacher Materials and Preparation

**MAKE:**

✓ Construct a blank wall chart using the **Sample Wall Chart** as a model. The chart should be made of butcher paper using large felt pens so it can be seen from the back of the room. There are nine rows on the chart—one for chicken pox and eight for the other diseases to be studied.

**COPY:**

✓ Make one copy per student of the **Communicable Disease Overview**, to be handed out following the lesson as an information sheet for students.

✓ Make one copy per student of the **Description of Diseases** handout.

✓ Make one copy per student of the **Disease Questions Worksheet**.

**REVIEW**

✓ Familiarize yourself with the **Communicable Disease Overview** and the **Sample Wall Chart**, including the characteristics of chicken pox.

## Procedure:

■ Ask students to indicate by a show of hands if they have ever had chicken pox. Call on individual students to share their experiences. Guide them into sharing what it was like, how they got it, how long it lasted, how they knew they had it and who else in their family also got it. As students share general information, translate it into a specific category on the chart. For example, if a student says that his younger brothers both came down with chicken pox after he did, explain that the brothers caught the disease because the older brother *transmitted* it to them.

■ Using chicken pox as your example, go through each category,

having students suggest the appropriate information for each box. In many categories, student guesses will be inaccurate and the teacher will need to supply correct information. Depending on the level of the class, discuss the definitions for each category.

■ When the chart has been filled out for chicken pox, tell students the categories can be used to better understand any disease. Explain that they will be working in small groups to become informed about one specific disease. Each group will receive a paragraph containing information about their assigned disease. The groups will be responsible for sharing that information with the class.

■ Divide the class into eight cooperative groups of three or four each. Distribute one copy of the **Description of Diseases** handout and one copy of the **Disease Questions Worksheet** to each student. Assign one disease to each group. Ask group members to read the questions on the worksheet to each other before reading the paragraph on their assigned disease. Tell groups to choose one member to read the disease information on the handout aloud to the other group members. After the paragraph is read, group members should answer the questions on the worksheet together, making sure each member has written down the correct answer.

■ When all groups have completed these tasks, have them distribute questions among members for mini-reports to the class on their diseases. As each group completes its report, the members should fill in the wall chart for their disease.

■ Upon completion of all group reports, ask students to summarize what they have learned in this lesson. This should be a brainstorming session in which students are encouraged to make generalizations about disease based on specific information about particular diseases. Distribute one copy of the **Communicable Disease Overview** to each student to use for future reference.

## Evaluation:

Teachers should collect worksheets and observe participation during the brainstorming session to check for understanding of the characteristics of diseases studied.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Students can use survey techniques to take a census on communicable diseases, surveying the incidence of cold and flu in the classroom or school. Math-related activities can be introduced by displaying and interpreting the results.

STUDENT

# DISEASE QUESTIONS WORKSHEET

**Group Members' Names:**

_____ _____

_____ _____

**NAME OF DISEASE:** _____

1. What is the **cause** of this disease?_____

_____

_____

2. What are some of the **symptoms** of this disease?_____

_____

_____

3. How is this disease **transmitted** to people?_____

_____

_____

4. What are some of the **effects** of this disease? _____

_____

_____

STUDENT

5. How can this disease be **treated**? _____

_____

_____

6. How can this disease be **prevented**? _____

_____

_____

# DESCRIPTION OF DISEASES

## Dysentery

Dysentery is a disease caused by bacteria. Common symptoms of dysentery are diarrhea and stomach pains. The bacteria can be passed to people through food, water or flies. The effects of the disease range from mild symptoms to death caused either by a lack of water (dehydration) or by bacterial poisoning. Dysentery can be treated with antibiotics (medicine), along with rest and a heavy liquid diet. It can be prevented by cleanliness and careful storage of food and water.

## Leprosy

Leprosy is a disease caused by bacteria. A common symptom of leprosy is sores on the skin. While the transmission of the disease is not completely understood, it is known that continued close contact can transmit the disease.

The effects of the disease include deformities to body extremities (hands and feet), tissue deterioration and in some cases, death. Leprosy is treated with drugs (sulfones) and victims are usually isolated. There is no known way to prevent leprosy.

## Typhoid Fever

Typhoid fever is a disease caused by bacteria. Common symptoms include fever, being sick to the stomach and pneumonia. The disease can be transmitted through food or water that has been contaminated by urine or feces. Some of the long-range effects of the disease include deterioration of the heart, lungs, liver, skeletal and muscular systems, and in some cases, death. Typhoid fever can be treated with modern drugs. It can be prevented by cleanliness, isolating the carriers and a short-term vaccine.

## Polio

Polio is a disease caused by a virus. Common symptoms are headaches, neck and back pains, fever, vomiting, stomach pains and constant tiredness. Droplets can be breathed in through the nose or swallowed through the mouth. Some of the effects are muscular deformity, partial or total paralysis or loss of normal breathing ability. Polio is treated with total bed rest and pain relievers. It can be prevented by vaccination or by isolation of persons infected.

## Rubella

Rubella is a disease caused by a virus. Some common symptoms are fever, coughing and a rash. It can be transmitted by breathing in droplets. Some of the effects are ear infections, pneumonia and even death. Babies born to mothers who had rubella during pregnancy can be born with birth defects. Rubella can be treated with rest, aspirin* and liquids. It can be prevented by vaccination or isolation of persons infected. (*Note: aspirin is not recommended for children and teenagers. An aspirin substitute should be used.)

## Bubonic Plague

Bubonic plague is a disease caused by bacteria. This disease was called the "Black Death" in the Middle Ages when it killed millions of people throughout the world. It is still a problem in the world today. Some common symptoms are fever, coughing, being sick to the stomach and large sores. It can be transmitted by flea bites or in the feces of fleas that are carried by rats or other rodents. Some of the effects are scarring of the skin, deformities, weakness of vital organs (heart and lungs) and in some cases, death. Bubonic plague can be treated with antibiotics (medicine). It can be prevented by controlling the rat population and cleanliness and through vaccinations.

## Malaria

Malaria is a disease caused by protozoa. Common symptoms are chills, fever, sweats and weakness. It is transmitted through mosquito bites. Some of the effects are damage to the vital organs (heart and lungs) and reduction of red blood cells. Malaria can be treated with modern drugs (quinine, atabrine and primaquine). It can be prevented by destroying mosquitoes and their nesting places.

## Tuberculosis

Tuberculosis, commonly known as TB, is caused by bacteria. Common symptoms are a dry cough and rise in body temperature. It can be transmitted by droplets inhaled in air or dust and is sometimes present in milk or food. TB can spread quickly among people who live in overcrowded conditions. Some effects are destruction of lung tissue, skin and joints. Tuberculosis can be treated with rest and drugs. If it is discovered early, it can be cured.

TEACHER

# SAMPLE WALL CHART

| DISEASE | CAUSE | SYMPTOMS | TRANSMISSION |
|---|---|---|---|
| CHICKEN POX (Example) | virus | slight fever, tiredness, loss of appetite, blisters on the skin | airborne droplets, indirect contact with nose and throat secretions, contact with fluid in blister |
| DYSENTERY | | | |
| LEPROSY | | | |
| TYPHOID FEVER | | | |
| POLIO | | | |
| MEASLES | | | |
| BUBONIC PLAGUE | | | |
| MALARIA | | | |
| TUBERCULOSIS | | | |

TEACHER

## SAMPLE WALL CHART Continued

| EFFECTS | TREATMENT | PREVENTION | DISEASE |
|---|---|---|---|
| severe itching | rest | isolation<br>no vaccine | CHICKEN POX<br>(Example) |
| | | | DYSENTERY |
| | | | LEPROSY |
| | | | TYPHOID FEVER |
| | | | POLIO |
| | | | MEASLES |
| | | | BUBONIC<br>PLAGUE |
| | | | MALARIA |
| | | | TUBERCULOSIS |

# COMMUNICABLE DISEASE OVERVIEW

| DISEASE | CAUSE | SYMPTOMS | TRANSMISSION |
|---|---|---|---|
| DYSENTERY | bacteria* *some types of dysentery can be caused by a virus or a protozoa | stomach pains, diarrhea | food or water, flies |
| LEPROSY | bacteria | sores on the skin | unclear, prolonged close contact |
| TYPHOID FEVER | bacteria | fever, cough, sick to one's stomach, aching, heart failure, pneumonia | food or water contaminated by feces or urine |
| POLIO | virus | headaches, neck and back pains, fever, vomiting, stomach pains, tiredness | respiratory droplets ingestion, fecal contamination |
| RUBELLA | virus | fever, cough, rash | inhaling of droplets, contact with open sores |
| BUBONIC PLAGUE | bacteria | fever, cough, sick to one's stomach, large sores | from rats or other rodents by flea bites, or in feces of fleas |
| MALARIA | protozoa | chills, fever, sweats, weakness | saliva of the female mosquito |
| TUBERCULOSIS | bacteria | dry cough, rise in body temperature | droplets inhaled in air or dust, sometimes present in milk or food |

## COMMUNICABLE DISEASE OVERVIEW Continued

| EFFECTS | TREATMENT | PREVENTION | DISEASE |
|---|---|---|---|
| ranges from mild attack to death by lack of water or bacterial poisoning | antibiotics (medicine), rest, heavy liquid diet | cleanliness, careful storage of food and water | DYSENTERY |
| deformities of extremities, tissue deterioration, untreated leads to death | isolation, sulfones (medicine) | unknown | LEPROSY |
| deterioration of heart, lungs, liver, skeletal and muscular systems, death | modern drugs | cleanliness, isolation of carrier, short-term vaccine | TYPHOID FEVER |
| muscular deformity, partial or total paralysis, loss of normal breathing ability | total bed rest, analgesics (medicine) | vaccination, isolation | POLIO |
| ear infections, pneumonia, death, birth defects | rest, aspirin, liquids | vaccination, isolation | RUBELLA |
| scarring of the skin, deformities, weakening of vital organs, death | antibiotics (medicine) | rat control, sanitation, limited vaccine | BUBONIC PLAGUE |
| vital organ damage, reduction of red blood cells | modern drugs (quinine, atabrine, primaquine) | destroying mosquitoes and their nesting places | MALARIA |
| destruction of lung tissue, skin, joints | rest, drugs | early detection prevents further damage | TUBERCULOSIS |

LESSON 7

# DISEASES: CAUSES AND TRANSMISSION

## Objective

Students will be able to describe the causes, symptoms, transmission, effects, treatment and prevention of some communicable diseases.

## Time

One 50-minute period

## Overview

In this lesson students build a chart about diseases to reinforce the concepts of disease, cause, symptoms, transmission, effects, treatment and prevention before moving on to content about sexually transmitted diseases (STDs).

Students look at a chart of communicable diseases and the teacher leads a critical thinking discussion. After working in groups to summarize the discussion, students identify "Rules for Prevention of Many Communicable Diseases" to generalize later to STDs.

## Instructional Strategies

Critical thinking discussion, cooperative learning groups, worksheets.

## Teacher Materials and Preparation

**HAVE:**

✓ Communicable Disease wall chart completed in previous lesson (or make it if necessary). Each student needs to have his or her own copy of the **Communicable Disease Overview** used in the previous lesson.

✓ Large sheet of butcher paper and colored markers.

**COPY:**

✓ Make one copy per student of the **My Health Inventory** worksheet.

✓ Make one copy per student of the **Drawing Conclusions—Communicable Disease** worksheet.

**REVIEW:**

✓ Familiarize yourself with the **My Health Inventory—Teacher Information Sheet**.

## Procedure

■ Introduce **My Health Inventory** to students by asking them what they do to stay healthy. Have them read each statement carefully and answer each statement as honestly as possible by putting a mark in the box next to the statements that apply to them. Allow enough time for students to complete the inventory. As necessary, read the statements aloud or call on students to read. When students have finished the inventory, use the **My Health Inventory—Teacher Information Sheet** to conduct a brief discussion of each category. Conclude by emphasizing the importance of *prevention* in stopping the spread of communicable disease.

■ Refer to the wall chart and remind students that some diseases are communicable and others are not. Explain that since the class is studying AIDS, a communicable disease, the students will study more about communicable diseases. Also point out that science

and medicine still have many unanswered questions. Doctors are still looking for solutions to many health problems.

Have students move close to the wall chart. Point out each disease, leading students horizontally across the chart to note cause, symptoms, transmission, effects, treatment and prevention.

■ Use the following questions while focusing on the vertical columns on the wall chart. These questions are designed to help students make important generalizations about the concept of communicable disease.

- Name some organisms that cause disease.
- What are some common symptoms of diseases?
- How are diseases transmitted?
- Do you see any common transmission by viruses? By bacteria?
- Do diseases cause death? Which ones?
- Do diseases leave permanent damage? Which ones?
- Which disease is the least harmful? Why do you say that?
- Which disease is the most harmful? Why do you say that?
- Do any of these diseases have the same treatment?
- What are some of the common treatments? What treatments apply to only one disease?
- How are diseases prevented from being transmitted?
- Which diseases could be associated with cleanliness?
- Which diseases are more likely to occur in places where people live in overcrowded conditions?
- Can you make a generalization about preventing disease transmission?

■ Continue questioning in a logical progression, allowing several answers for each of the questions. Allow time for students to formulate answers. Ask students to make comparisons to see if virus-caused diseases have similar symptoms, modes of transmission, effects, treatment and prevention.

■ When discussion is complete, give each student the **Drawing Conclusions—Communicable Disease** worksheet. Have students work in groups. Encourage them to fill out their own worksheet as far as possible and then check with group members.

■ Conclude the lesson by asking students to share their ideas about "Rules for Prevention of Many Communicable Diseases." Write the rules on a large sheet of paper to display in the room during the rest of the unit.

## Evaluation

Teacher assessment of responses on worksheets, **My Health Inventory** and **Drawing Conclusions—Communicable Disease**, to observe student ability to describe cause and transmission of disease.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Have students work in pairs to brainstorm a list of diseases. Then combine pairs in groups of four to share lists. Allow students to choose a disease and conduct a library search on it to add information to the Communicable Disease wall chart.

STUDENT

# My Health Inventory

## Diet/Nutrition

____ I eat from the 4 food groups every day.
____ I am often on a diet to lose weight.
____ I choose candy bars and french fries over vegetables and fruit.

## Sleep

____ I get about 8 hours of sleep every night.
____ I watch TV until 11 or 12 o'clock at night.
____ I often have a hard time falling asleep.
____ I hate to get up in the morning.

## Hygiene

____ I wash my hands after going to the toilet.
____ I wash my hands before eating.
____ I take a bath or shower every day.
____ I change my bed and wash my clothes regularly.

## Fitness

____ The only exercise I get is at school during gym.
____ I exercise regularly.
____ I know I should exercise but I prefer watching TV.

## Risk Behavior

____ I buckle up every time I get in a car.
____ I want to live a long time; I don't take unnecessary chances.
____ All this talk about being safe spoils having a good time.

## Drugs/Alcohol

____ I will not try drugs or alcohol during my teen years.
____ I think it is O.K. to drink and use drugs on special occasions.
____ It's O.K. to use drugs and alcohol to relax and have fun.

## Stress

____ I have someone to talk to when I'm upset.
____ I often get angry and blow up.
____ Sometimes I feel so sad I would like to die.

## Prevention

____ I think I have all my immunizations.
____ I have had a check-up with my doctor in the last 3 years.
____ I have been to the dentist in the last year.

TEACHER

# MY HEALTH INVENTORY

*Teacher Information Sheet*

The preceding worksheet is designed to stimulate thinking and discussion before looking at communicable diseases and their causes. The **My Health Inventory** student worksheet could be used as an introductory activity in a comprehensive health program. While conducting an AIDS education program it is important to remember that a healthful lifestyle is a key to preventing AIDS. Use this discussion to establish this basic concept.

The following paragraphs highlight points for the teacher to stress.

## Diet/Nutrition

While a whole unit is required to appropriately address this topic, emphasize that good nutrition helps provide for a healthy immune system. Be alert to students with beginning eating disorders. Greater and greater numbers of young girls entering adolescence are on perpetual diets so they will look as thin as models. Many young boys are also getting into dieting—both from a vanity standpoint and from a sports perspective, as in qualifying for a lighter weight class in sports such as wrestling. Most health experts feel that only grossly overweight children should be on diets and then only under the supervision of a physician. This is a time when it is normal and healthy for children to gain weight.

## Sleep

Children entering adolescence usually need 8-10 hours of sleep each night to be healthy. Some children at this age experience insomnia. Be aware that such sleep disorders may be an indication of high stress or substance abuse.

## Hygiene

Cleanliness is disease prevention. Washing hands appropriately will prevent the spread of many kinds of diseases. When students look at the disease chart and see the instances of disease transmission that occur through fecal contamination the teacher can connect cleanliness to the prevention of disease.

## Fitness

More is being learned all the time about the relationship of exercise to overall wellness. A comprehensive fitness program is an important part of a total health curriculum.

## Risk/Safety

Accidents are the number one killer of children. High-risk behavior brings people into contact with life-threatening situations. AIDS is life threatening. Riding a bicycle without a helmet or without a light at night or riding double are all life threatening. Students need to understand the difference between healthy excitement and life-threatening behavior.

## Drugs/Alcohol

Health educators take the position that there is no responsible use of alcohol or drugs, other than medicine, for children.

Children who begin to use drugs and/or alcohol before the age of 15 are at much greater risk for addiction than those who wait until they are of legal age for experimentation and use. Substance use and abuse lowers the functioning of the immune system. The use of IV drugs in particular puts the individual at risk for AIDS infection in addition to drug addiction.

## Stress

Teen stress is an important concern for society. Depression, suicide, sleeping disorders, eating disorders, substance abuse, academic pressure and family problems can be indicators of teen stress. Having one or two good friends to talk to is one of the healthiest things children and adults can have in life. Teachers can include the making and keeping of friends in a health education program. In the case of depression that can lead to suicide, a strong exercise program and a friend are both important strategies. Both stress and depression affect the functioning of the immune system.

## Prevention

Most states have requirements that students entering school must have completed immunizations before registration can take place. This helps to prevent the spread of certain diseases in school populations. Regular visits to the doctor and dentist can also help identify preventable conditions. Children who do not have access to private physicians and dentists may receive check-ups at local health clinics. People need to know what personal conditions are symptoms of disease and where to get help if they appear. Early treatment of STDs will prevent their spread and in some cases can cure the disease.

STUDENT

# Drawing Conclusions—Communicable Disease

Name_____

Date_____

1. List some organisms that cause disease.

2. What are some common symptoms of diseases?

4. List some ways diseases are prevented from being transmitted.

5. List some ways diseases are treated.

6. Which diseases are the least and most harmful and why?

7. Which diseases are associated with lack of cleanliness?

8. Make a good health rule "for the prevention of many communicable diseases."

Other important rules are:

TEACHER

# Drawing Conclusions—Communicable Disease

*Key*

1. List some organisms that cause disease.
   *Pathogens (germs), viruses, bacteria, fungi and protozoa.*

2. What are some common symptoms of diseases?
   *Fever, cough, headaches, stomach pains, diarrhea, rash or sores, vomiting.*

3. List some ways diseases are transmitted.
   *Air, water or food, direct contact, bites from carrier.*

4. List some ways diseases are prevented from being transmitted.
   *Avoiding carrier, cleanliness, vaccination, avoiding contaminated food and water, insect and rodent control.*

5. List some ways diseases are treated.
   *Antibiotics, rest, heavy liquid diet, aspirin, quinine, atabrine.*

6. Which diseases are the least and most harmful and why?
   *Answers will vary. Least harmful diseases like chicken pox and common cold. Most harmful will be those that cause death or permanent damage to the body.*

7. Which diseases are associated with lack of cleanliness?
   *Answers will vary. Dysentery, typhoid fever.*

8. Make a good health rule "for the prevention of many communicable diseases."
   *Answers will vary. Kill the pathogens, sanitary sewage disposal, boil suspect water, don't come into close contact with an infected person, avoid using others' utensils, clean and treat wounds, keep hands clean and away from mouth, get inoculations, rest, good food, fitness, feel good about yourself, abstain from drugs and alcohol.*

Lesson 8

# A COMPARISON OF STDs

## Objective

Students will be able to explain characteristics of sexually transmitted diseases, including AIDS.

## Time

One 50-minute period

## Overview

The structure and process used in this lesson are similar to those used in Lesson 6. Rather than focusing on diseases in general, this lesson looks at AIDS and other sexually transmitted diseases (STDs). It reviews and extends the concepts developed in Lesson 6.

Once again, students use a master wall chart to record information they have learned about one sexually transmitted disease. After studying a disease, answering questions about the disease and sharing with the class, students will complete the wall chart.

## Instructional Strategies

Cooperative learning groups, research, worksheets, oral presentations, brainstorming.

## Teacher Materials and Preparation

**MAKE:**

✓ Construct a blank wall chart using the **Sample Wall Chart** as a model. The chart should be made of butcher paper using large felt pens so it can be seen from the back of the room.

**COPY:**

✓ Make one copy per student of the **Sexually Transmitted Diseases Overview**, to be handed out following the lesson as an information sheet for students.

✓ Make one copy per student of the **Description of Sexually Transmitted Diseases** handout.

✓ Make one copy per student of the **STD Questions Worksheet**.

**REVIEW:**

✓ Familiarize yourself with the information contained in the **Sexually Transmitted Diseases Overview**, including both content and categories.

## Procedure

■ Explain to students that, instead of studying general diseases, this lesson focuses on sexually transmitted diseases (STDs). Remind students about the discussion of chicken pox. If Lesson 6 was not studied, use the chicken pox example suggested there as an introduction to this lesson.

■ Tell students they will be working in small groups to become informed about one specific sexually transmitted disease. Explain that each group will receive a paragraph containing information about its assigned disease. Groups will be responsible for sharing that information with the class.

■ Divide the class into eight cooperative groups of three or four each. Distribute one copy of the **Description of Sexually Transmitted Diseases** handout and one copy of the **STD Questions**

**Worksheet** to each student. Ask group members to read the questions on the worksheet to each other before reading the paragraph on their assigned disease. Have groups choose one member to read the disease information on the handout aloud to the other group members. After the paragraph is read, group members should answer the questions on the worksheet together, making sure each member has written down the correct answer.

■ When all groups have completed these tasks, have them distribute questions among members for mini-reports to the class on their diseases. As each group completes its report, the members should fill in the wall chart for their disease.

■ Upon completion of all group reports, ask students to summarize what they have learned in this lesson. This should be a brainstorming session in which students are encouraged to make generalizations about sexually transmitted diseases based on the information presented. Distribute one copy of the **Sexually Transmitted Diseases Overview** to each student to use for future reference.

## Evaluation

Teacher assessment of student responses on worksheets and participation during the brainstorming session to check for understanding of sexually transmitted diseases.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Invite a guest speaker from the local health department to give an overview of sexually transmitted diseases and explain the role of the health department in preventing the spread of STDs.

STUDENT

# STD QUESTIONS WORKSHEET

**Group Members' Names:**

_____ _____

_____ _____

**NAME OF DISEASE:**

1. What is the **cause** of this disease?

2. What are some of the **symptoms** of this disease?

3. How is this disease **transmitted** to people?

4. What are some of the **effects** of this disease?

5. How can this disease be **treated**?

6. How can this disease be **prevented**?

STUDENT

# DESCRIPTION OF SEXUALLY TRANSMITTED DISEASES

**AIDS**

AIDS is a breakdown in the immune system caused by a virus commonly called HIV (human immunodeficiency virus). The common symptoms of AIDS (also called HIV infection) include tiredness, fever, chills, weight loss, swollen glands, white spots in the mouth and constant diarrhea. The AIDS virus can be passed to people through semen, blood or vaginal fluids. This can happen during sexual intercourse, sharing of unsterile needles or from mother to child during pregnancy. Some of the effects of AIDS are a weakened immune system, a variety of diseases and cancers and in most cases, death. There is no known cure for AIDS, only treatments for other diseases caused by the AIDS virus. AIDS can be prevented by abstaining from IV (intravenous) drug use and sexual activity. If sexually active, the odds for getting the AIDS virus can be reduced by having only one partner, using condoms and using a contraceptive jelly with the special chemical nonoxynol-9.

**Chlamydia**

Chlamydia is a sexually transmitted disease caused by bacteria. The common symptoms of chlamydia include an abnormal discharge from the penis or vagina, a burning sensation when urinating and for women, bleeding between periods. It is also possible to have no symptoms. The bacteria can be passed from person to person during sexual contact, and babies may get it from their mothers during birth. Some of the effects of chlamydia are severe damage to the reproductive organs, infertility in women and sterility in men (not able to have children). Chlamydia can be treated with antibiotics (medicine). It can be prevented by abstaining from sexual activity (not having sexual intercourse), or if sexually active, by knowing your partner does not have the bacteria and by using condoms with foam or contraceptive jelly.

**Genital Warts**

Genital warts are a sexually transmitted disease caused by a virus. The common symptoms are small, bumpy warts on the sex organs or anus. They are transmitted through skin-to-skin contact with genital warts. The virus can be passed from mother to baby during birth and cause breathing problems in the newborn. Genital warts can grow larger, spread to more areas and become more serious. They can be treated with chemicals or removed by burning, freezing, lasers or minor surgery. They can be prevented by abstaining from sexual activity (not having sexual intercourse), or if sexually active, by knowing your partner does not have the virus and by checking for the presence of warts. Washing exposed areas with soap and water before and after

contact will also help. Using condoms and foam or contraceptive jelly can also help prevent exposure.

**Gonorrhea**
Gonorrhea is a sexually transmitted disease caused by bacteria. The common symptoms include abnormal discharge (pus) from the penis or vagina, a burning sensation when urinating and in women, stomach pains. Some men and most women may have no outer symptoms. The bacteria can be transmitted from person to person through sexual contact. Babies can get it from their mothers during birth. Some of the effects of gonorrhea are severe damage to the reproductive organs, infertility in women and sterility in men (not able to have children), heart trouble, skin disease and arthritis. Gonorrhea can be treated with antibiotics (medicine). It can be prevented by abstaining from sexual activity (not having sexual intercourse), or if sexually active, by knowing your partner does not have the bacteria, washing exposed areas before and after contact and using condoms and contraceptive foam or jelly.

**Herpes**
Herpes is a sexually transmitted disease caused by a virus. Common symptoms include small, painful blisters—usually on the sex organs—and a flu-like feeling . Some people have no symptoms. Herpes is transmitted during sexual contact or by direct contact with a herpes sore. Babies can get it from their mothers during birth. The effects include mild to severe attacks of painful sores. There is no known cure for herpes, but there are some drugs used to reduce symptoms. It can be prevented by avoiding contact with herpes sores, abstaining from sexual contact or using condoms and contraceptive foam or jelly.

**Pubic Lice**
Pubic lice are a sexually transmitted disease caused by parasites (tiny insects or protozoa) that live in pubic hair, armpits or eyebrows. Common symptoms include itching or the appearance of lice in the hair, around the sex organs, armpits or eyebrows, and pin-sized blood spots on underwear. They can be transmitted through close physical contact with someone who has pubic lice or by using the same clothing or bedding as someone who has them. The effects include itching and discomfort that get worse if not treated. Pubic lice can be treated with special lotions and shampoos, and all clothing and bedding must be washed in hot water. They can be prevented by avoiding contact with someone who has lice. Sexual partners should be checked for signs of pubic lice.

**Syphilis**
Syphilis is a sexually transmitted disease caused by bacteria. The common symptoms in the first stage are painless, reddish-brown sores on the opening of the sex organs

and possible swollen glands. In the second stage, after six weeks, a rash may appear on the body and you may feel like you have the flu. Syphilis is transmitted through sexual contact. Babies can get it from their mothers during pregnancy. Some effects are heart disease, brain damage, blindness and death. Syphilis can be treated with antibiotics (medicine). It can be prevented by abstaining from sexual activity or if sexually active, by knowing your partner does not have the bacteria, washing the sex organs before and after sexual contact and using condoms and contraceptive foam or jelly.

**NGU**

NGU is a sexually transmitted disease caused by bacteria. Some common symptoms in men include an abnormal discharge from the penis, itching and pain while urinating. Women may have an abnormal discharge, but usually show no symptoms. NGU is transmitted through sexual contact. Babies can get it from their mothers during birth. Effects include a more serious infection of the reproductive organs and infertility in women and sterility in men (not able to have children). NGU can be treated with antibiotics (medicine). It can be prevented by abstaining from sexual activity or if sexually active, by knowing your partner does not have the bacteria, washing the sex organs before and after contact and using condoms and contraceptive foam or jelly.

STUDENT

# Sexually Transmitted Diseases Overview (1)

| DISEASE | CAUSE | SYMPTOMS | TRANSMISSION |
|---|---|---|---|
| **AIDS** | virus | tiredness, fever, chills, weight loss, swollen glands, white spots in mouth, constant diarrhea | sexual contact, sharing infected needles, mother to baby during pregnancy, through blood, semen and vaginal fluids |
| **Chlamydia** | bacteria | abnormal discharge from penis or vagina, burning when urinating, bleeding between periods, may show no symptoms | sexual contact, mother to baby during birth |
| **Genital Warts** | virus | small, bumpy warts on the sex organs or anus | sexual contact, skin-to-skin contact with genital warts, mother to baby during birth |
| **Gonorrhea** | bacteria | abnormal discharge from penis or vagina, burning when urinating, stomach pains in women, may show no symptoms | sexual contact, from mother to baby during birth |
| **Herpes** | virus | small, painful blisters on sex organs or mouth, flu-like feelings, may have no symptoms | sexual contact, direct contact with herpes sore, mother to baby during birth |
| **Pubic Lice** | parasites that live in pubic hair, armpits or eyebrows | itching, lice in hair, pin-sized blood spots on underwear | close physical contact, using same clothing or bedding as infected person |
| **Syphilis** | bacteria | 1st Stage – reddish-brown sores on opening of sex organs, swollen glands<br>2nd Stage – rash, and flu-like feelings | sexual contact, mother to baby during pregnancy |
| **NGU** | bacteria | abnormal discharge from penis and pain while urinating, itching, usually no symptoms in women | sexual contact, mother to baby during birth |

STUDENT

# Sexually Transmitted Diseases Overview (2)

| EFFECTS | TREATMENT | PREVENTION | DISEASE |
|---|---|---|---|
| weakened immune system, some cancers, pneumocystis carinii pneumonia, damage to central nervous system, death | no known cure, treatments only for other diseases caused by AIDS | abstain from IV drug use and sexual activity; if sexually active, know your partner's history, use condoms and foam or jelly | **AIDS** |
| severe damage to reproductive organs, infertility in women, sterility in men | antibiotics (medicine) | abstain from sexual contact; if sexually active, know your partner's history, use condoms and foam or jelly | **Chlamydia** |
| can grow larger, spread to more areas and become more serious | can be treated with chemicals, removed by burning, freezing, lasers or minor surgery | abstain from sexual contact; if sexually active, wash exposed areas before and after contact, use condoms and foam or jelly | **Genital Warts** |
| severe damage to reproductive organs, infertility in women, sterility in men, heart trouble, skin disease, arthritis | antibiotics (medicine) | abstain from sexual contact; if sexually active, know partner's history, use condoms and foam or jelly | **Gonorrhea** |
| mild to severe attacks of painful sores | no known cure, symptoms can be treated with drugs | avoid contact with herpes sores, use condoms and foam or jelly | **Herpes** |
| itching and discomfort will get worse | special lotions or shampoos, all clothing and bedding must be sterilized | avoid contact with infested individual | **Pubic Lice** |
| heart disease, brain damage, blindness, death | antibiotics (medicine) | abstain from sexual contact; if sexually active, know partner's history, use condoms and foam or jelly | **Syphilis** |
| serious infection of reproductive organs, infertility in women, sterility in men | antibiotics (medicine) | abstain from sexual contact; if sexually active, know your partner's history, wash before and after contact, use condoms and foam or jelly | **NGU** |

TEACHER

# SAMPLE WALL CHART

| DISEASE | CAUSE | SYMPTOMS | TRANSMISSION | EFFECTS | TREATMENT | PREVENTION |
|---|---|---|---|---|---|---|
| **AIDS** | | | | | | |
| **Chlamydia** | | | | | | |
| **Genital Warts** | | | | | | |
| **Gonorrhea** | | | | | | |
| **Herpes** | | | | | | |
| **Pubic Lice** | | | | | | |
| **Syphilis** | | | | | | |
| **NGU** | | | | | | |

LESSON 9

# THE IMMUNOLOGY OF AIDS

## Objective

Students will be able to illustrate how the AIDS virus attacks the immune system.

## Time

One 50-minute period

## Overview

This lesson provides a brief overview of the immune system and reinforces student understanding of vocabulary. The way HIV (human immunodeficiency virus, also called the AIDS virus) attacks T-cells is described as students color **T-cell Destruction Worksheet**.

## Instructional Strategies

Individual reading, worksheet, mini-lecture, guided practice.

## Teacher Materials and Preparation

**COPY:**

- ✓ Make one copy per student of the **Immune System Overview**.
- ✓ Make one copy per student of the **Key Vocabulary Worksheet.**
- ✓ Make one copy per student of the **T-cell Destruction Worksheet**.

**HAVE:**

- ✓ Make colored pencils or crayons available for each student.

**REVIEW:**

- ✓ Familiarize yourself with the **Teacher Fact Sheet** before presenting the AIDS lecture.

## Procedure

■ Introduce lesson by explaining that to understand more about how the AIDS virus (HIV—human immunodeficiency virus) attacks the immune system, it is important to know how the immune system normally reacts when a person comes in contact with a disease. Tell students that they will read a brief overview of the immune system and then define vocabulary on a worksheet.

■ Give each student a copy of the **Immune System Overview** and the **Key Vocabulary Worksheet.** Have them work in cooperative groups, helping each other to read the material and find definitions for the words. Allow about 20 to 25 minutes for this activity.

■ Hand out **T-cell Destruction Worksheet** and colored pencils or crayons. Instruct students to use the same color for the T-cell and another color for the AIDS virus in all four illustrations.

■ Using the **Teacher Fact Sheet**, lead students through a mini-lecture, guided practice exercise. They should color and label each figure in the **T-cell Destruction Worksheet** as the process is explained. Display completed worksheets around the room.

## Evaluation

Teachers should check student worksheets and ask appropriate questions to determine if students understand how the AIDS virus attacks a normal, healthy immune system.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Have students check to see what questions from earlier lessons are addressed in this lesson. Encourage students to generate more questions for research as a result of this lesson.

The June 1986 issue of *National Geographic* magazine contains photographs of various cells in the human immune system taken by a scanning electron microscope ("Our Immune System: The Wars Within." *National Geographic* Vol. 169, No.6 [June 1986]: 702-733). The article offers excellent material for the teacher who wants to understand and teach the immune system in more detail.

STUDENT

# IMMUNE SYSTEM OVERVIEW

NAME _____ DATE _____

***Directions***: Read the following. Write definitions on **Key Vocabulary Worksheet** using this overview as a resource.

A *disease* occurs when there is an upset or breakdown in the body functions. People recover from some diseases in a short time. Other diseases last a long time. Some leave permanent damage. Other diseases can cause death.

Diseases can be caused by *pathogens*, which are disease-producing organisms or substances sometimes called "germs." Some *viruses, bacteria, fungi and protozoa* are pathogens. All of these are very small and can be seen only with a powerful microscope.

A virus is a bundle of genetic material with a special coating made of protein. A virus carries instructions for copying itself. A virus is not actually alive because it cannot reproduce itself. *It must invade a living cell to reproduce.*

A few of the diseases caused by viruses are *chicken pox, measles, mumps, polio, influenza and the common cold.*

When diseases are passed or *transmitted* from one person to another they are said to be *infectious* or *contagious.* There are three ways diseases can be transmitted: *by air, by water* and *by direct contact.*

Our bodies have ways of protecting us from disease. Our skin is strong and keeps out many diseases and infections.

The *white blood cells* are another protector. If you get cut and the cut is not clean, white blood cells surround and kill the germs. They help repair the damaged tissue.

When a virus like chicken pox enters the body the *immune system* produces chemicals called *antibodies.* The antibodies fight the disease. Some antibodies, like those for chicken pox, can stay in the body so the person will not be infected again. A person with such antibodies is said to have *active acquired immunity.*

It is also possible for a person be *exposed* or to come in contact with a disease and not become *infected.* Or, a person may be infected with a disease and have no outward

*symptoms*, but can transmit pathogens to others. Sometimes people come in contact with a disease, and because they have a healthy immune system they get sick for a very short time. Sometimes they are infected and become quite ill. The time between *infection* (when the pathogen enters the body) and the signs of the disease is the *incubation* period.

A person who has a disease that is *contagious* is called a *carrier* or is said to be *infected.* Carriers may have symptoms of the disease or may look and feel perfectly healthy.

Some people have a *natural immunity* and never get certain contagious diseases.

Scientists are able to make a substance that will make antibodies appear in the body without the person having to get sick. This substance is called a *vaccine. Passive acquired immunity* is created by the vaccine, which is generally injected (a shot). In some cases immunity wears off and vaccination is repeated with boosters every few years, as in the case of tetanus. When was your last tetanus shot?

STUDENT

# KEY VOCABULARY WORKSHEET

NAME_____ DATE _____

***Directions***: Read the **Immune System Overview**. Write a definition for each of the following words.

**Antibody:** _____

_____

**Carrier:** _____

_____

**Disease:** _____

_____

**Exposure:** _____

_____

**Infection:** _____

_____

**Pathogens:** _____

_____

**Vaccine:** _____

_____

**White blood cells:** _____

_____

**Active acquired immunity:** _____

_____

**Passive acquired immunity:** _____

_____

TEACHER

# KEY VOCABULARY WORKSHEET

*Key*

NAME_____ DATE_____

***Directions***: Read the **Immune System Overview**. Write a definition for each of the following words.

**Antibody**: A chemical produced by the immune system that fights disease.

**Carrier**: A person who has a disease that is contagious.

**Disease**: An upset or breakdown in the human body. Can leave permanent damage or cause death. Caused by pathogens.

**Exposure**: Coming in contact with pathogens.

**Infection**: Pathogens enter the body.

**Pathogens:** Microscopic organisms that cause disease.

**Vaccine:** A substance produced by scientists that is usually injected to prevent disease.

**White blood cells:** Important part of the immune system for fighting disease.

**Active acquired immunity:** A condition that prevents a person from getting a disease again once you have gotten the disease.

**Passive acquired immunity:** Disease protection obtained by a vaccine.

# TEACHER FACT SHEET

*AIDS Mini-Lecture*

**Introduction:** The immune system is very complicated. There are many different parts that work together to fight diseases and infections. Our glands and blood, consisting of many different kinds of blood cells and other body fluids, make up the immune system.

The T-helper cell is one part of the immune system. It roves through the body in the bloodstream, like a sentry looking for the enemy, searching for pathogens (germs). When a pathogen is located the T-helper cell sends a message for antibodies to be produced to attack the pathogen. Antibodies kill the pathogen and the body is healthy again.

**STEP 1**

This is an infected T-helper cell.

The T-helper cell is one of the cells that the AIDS virus (HIV) attacks. When blood, semen or other body fluids enter the body of another person, the T-helper cells can be infected with HIV (human immunodeficiency virus).

Inside the T-helper cell, HIV (the AIDS virus) can stay for a long time without causing any damage. A person with the virus can be tested to see if antibodies to the virus are in his or her body. We do know that HIV can hide quietly in the T-helper cell for a long time (ten or more years) and the person with the virus may not feel ill.

**STEP 2**

HIV reproduces.

For some reason that still puzzles scientists, a signal is received by the AIDS virus. It starts to reproduce itself.

**STEP 3**

HIV continues to multiply.

Soon the T-helper cell becomes so crowded with HIV it bursts. The T-helper cell is destroyed. Now the HIV is free in the blood, semen and other body fluids to hunt for other T-helper cells to invade. [*Teacher Note:* This demonstrates infection by cell-free virus. It is also possible to have cell-to-cell transmission among various other cells.]

**STEP 4**
The cycle is repeated.

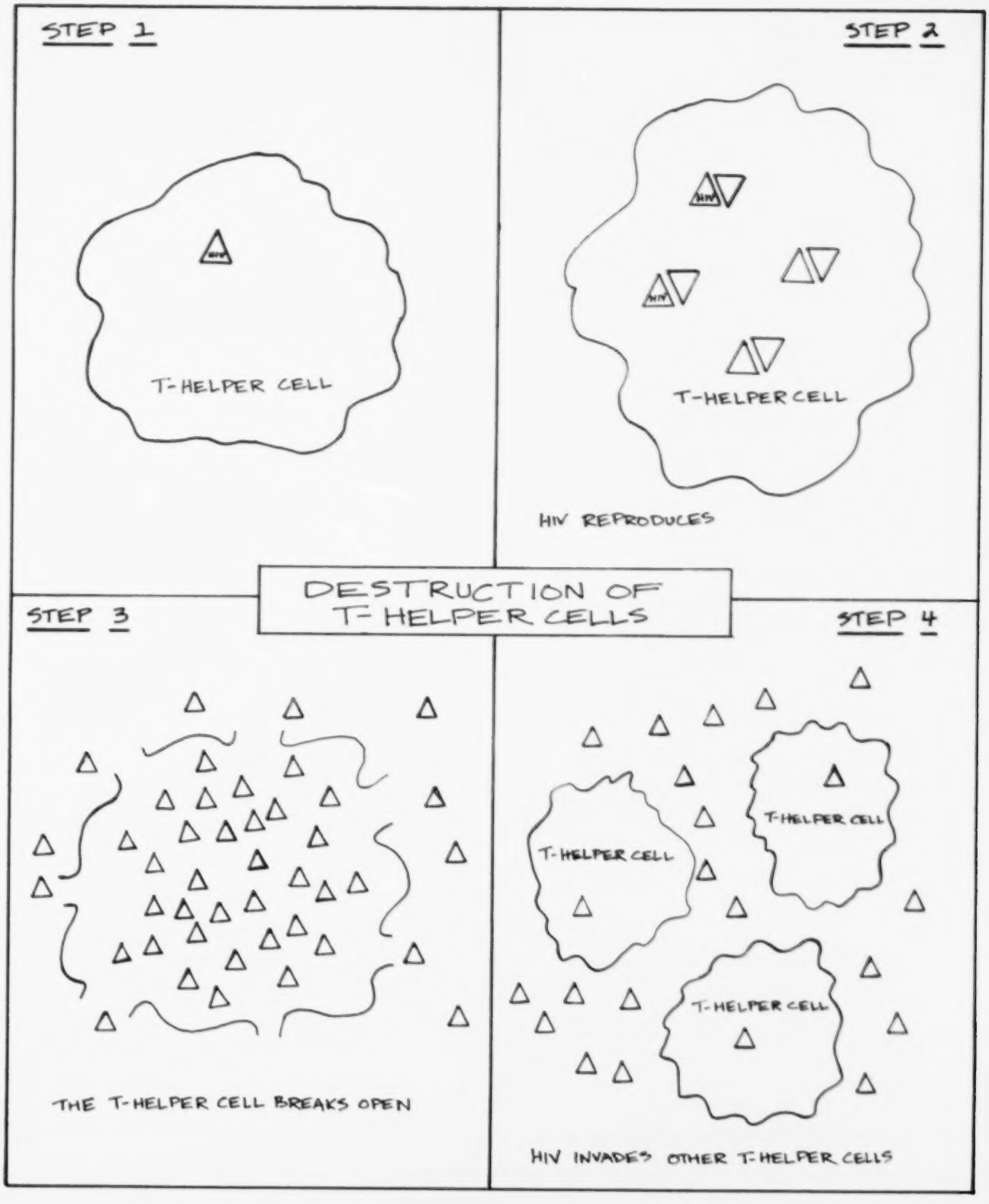
HIV invades other T-helper cells. The process continues until many, many T-helper cells are destroyed.

Now the immune system is in trouble. There are very few T-helper cells to be sentries and hunt for pathogens. The signal for the production of antibodies to fight diseases is not sent out when a pathogen enters the body.

The person with HIV can now get infected by pathogens that he/she would normally have natural immunity to. Two diseases that often affect people with AIDS are PCP (*Pneumocystis carinii* pneumonia) and Kaposi's sarcoma (KS), a kind of cancer.

**Closure:** It is very important to know how to prevent HIV (the AIDS virus) from entering your body. A person will not get HIV if he/she does not have sexual intercourse or use intravenous drugs.

**STUDENT**


STEP 1
HIV
T-HELPER CELL
STEP 2
HIV
HIV
T-HELPER CELL
HIV REPRODUCES
DESTRUCTION OF T-HELPER CELLS
STEP 3
THE T-HELPER CELL BREAKS OPEN
STEP 4
T-HELPER CELL
T-HELPER CELL
T-HELPER CELL
HIV INVADES OTHER T-HELPER CELLS

LESSON 10

# THE TRUTH ABOUT MYTHS

## Objective

Students will be able to differentiate between facts and myths about the transmission and prevention of AIDS.

## Time

One 50-minute period

## Overview

One of the tragedies of AIDS is the perpetuation of misinformation. Many myths are created and passed on to others simply through ignorance and hearsay. These myths have caused unnecessary hardships on and prejudice toward many persons with AIDS. These myths have also spread irrational fears to some and left others unwittingly fearless.

In this lesson students role play four students having lunch. Their discussion centers on the new kid who has AIDS. The script brings out many of the misconceptions about AIDS and how it is transmitted. In response to the misinformation, one

knowledgeable student tells the others the truth about how AIDS is transmitted and how it is prevented.

## Instructional Strategies

Brainstorming, cooperative learning groups, role playing, critical thinking, worksheet.

## Teacher Materials and Preparation

**COPY:**

- ✓ Provide a copy of the **Truths and Myths Script** for each student.
- ✓ Make one copy of the **Truth or Myth Worksheet** for each student.

**REVIEW:**

- ✓ Familiarize yourself with the **Truths and Myths Script** used by the students and the **Truths and Myths List** provided for teacher background.

## Procedure

■ Have students imagine that a student with AIDS will be transferring into their class tomorrow. Ask them to react and record their thoughts and concerns on the board. Do not judge or contradict any of these thoughts.

■ Divide students into cooperative learning groups of four each. Distribute four copies of the **Truths and Myths Script** to each group.

*Teacher Note*: For younger or less advanced students you may choose to read the script aloud as a whole class, rotating roles after a few lines. This process would take the place of more involved cooperative learning groups that require higher order thinking skills. After reading through the script, volunteers could be called upon to point out lines that represent either facts or myths about the transmission of AIDS.

■ Ask that students assume the four roles within their groups. Students should read through the script completely two times.

The first time they should simply read it, looking for examples of facts and myths. The second time they should stop and underline phrases or sentences whenever someone thinks he/she has found a fact or a myth about AIDS.

■ After underlining sentences in the scripts, have group members divide their information into two lists, one for facts and one for myths. Call on a representative from each group to share one piece of information with the whole class. Continue until all facts and myths from the groups' lists have been recorded.

■ Have students look back at the thoughts and concerns listed on the board earlier and ask them to now label these as fact or myth based on the new information from the script. Using the **Truths and Myths List** provided as teacher background, add and discuss any others which have not been addressed.

■ Ask students to consider why myths about AIDS get started in the first place. Have them share their thoughts. Make sure to discuss the role fear and other emotions play in forming beliefs about controversial subjects.

■ Distribute the **Truth or Myth Worksheet** to each student and correct with the class immediately upon completion.

## Evaluation

Teachers will examine worksheets and observe student participation in the discussion to determine student understanding of the transmission of AIDS.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Have students in groups of four rehearse and present different sections of the role-play script. If the school has a video camera, record the performances to show at a later date.

STUDENT

# TRUTHS AND MYTHS SCRIPT

(Four students are having lunch and talking during noon break.)

José: Hey, has anybody seen that new kid yet, the one with AIDS they let into school?

Mark: No way and no thanks!

Janet: You mean Mike. He's in my science class. He's a pretty nice guy and smart, too.

Suzy: I hope you don't have to sit near him. What if he sneezed on you? My dad says you can catch AIDS just by kissing, so sneezing's probably the same.

José: What about us? If we have gym with him, we'd have to shower in the same room with him. All that sweat.

Janet: I can't believe you guys. You're crazy. Where'd you get those wacky ideas?

Mark: Well, you know, everybody's talking about it. My parents are ready to move me to another school. They won't even let me take the bus home anymore.

José: I don't even go in the bathrooms here anymore.

Suzy: And drinking faucets. It's only canned Coke for me these days.

Janet: You guys don't have to worry about any of that stuff. There's no way you can catch AIDS like that.

Mark: What makes you think you know so much?

Janet: Well, my mom's a nurse at the hospital. She has to keep up on everything there is to know about AIDS. And she took me to a conference with her last month. So I really do know a lot about the facts. But there's new

information coming all the time.

José: So tell us some of these so-called facts.

Janet: Only if you promise to listen and not be sarcastic.

Suzy: I'll listen—I really want to hear this.

Janet: What about you guys?

Mark: Yeah, we'll listen. Promise.

Janet: To start with, the AIDS virus is not that easy to get. When it's outside the body, chlorine bleach can kill it. The problem is when it gets inside the bloodstream. So far, nothing can kill it.

José: That's why we don't want Mike around us. We don't want to get it inside us.

Janet: But there's no way you're going to catch AIDS from Mike. Sometimes the AIDS virus can be found in all body fluids, like tears and saliva, but they only have traces, and you can't catch AIDS from them.

Suzy: Really? I didn't know that. So I could even share the same glass with Mike and I wouldn't get AIDS.

Janet: That's right. And you could shower in the same locker room, shake hands and probably even kiss him.

José: Ah, c'mon. I can't believe that. Are you telling me that you'd kiss Mike, knowing he has AIDS?

Janet: I didn't say that. I'm not sure what I'd do. I'd have to think about it. But I am saying that there hasn't been a single case reported or proven where someone has caught AIDS through kissing someone who has the AIDS virus. Some people say to avoid wet kissing if you want to be real safe, but there's still no proof.

Mark: If it's not that easy to get, how come so many people are getting it?

Janet: Most people who have AIDS got infected before they knew how to prevent it.

Suzy: How do you prevent it?

Janet: You prevent it by knowing the facts—by knowing it can only be transmitted through blood, semen and vaginal fluids.

Suzy: What about newborn babies?

Janet: That's right. I forgot that. If a pregnant mother has the AIDS virus, her newborn baby can also the have AIDS virus.

Mark: But what about the blood and semen and stuff?

Janet: Most people who have AIDS got it either through sexual contact, from sharing needles or through blood transfusions. And now they have new tests for screening blood, so they don't expect many more cases of AIDS because of transfusions.

José: How did Mike get AIDS?

Janet: He's a hemophiliac—which means every so often he needs blood transfusions. So before they had good ways to screen blood, Mike got a transfusion with blood that had the AIDS virus in it.

Suzy: What a drag! Poor guy!

Janet: Back to the ways you can get it. Sexual contact. That's probably the main way the virus has spread so quickly.

Suzy: There's no way! Sex is out for me. I'm never gonna have sex.

José: Oh, that's great! So we'll all find private islands and the human race will die out.

Janet: I don't think we have to be so drastic. But I know that I'm going to wait to have sex until I'm older and ready to handle all the responsibilities that go along with it—especially now.

Suzy: But even then, if you're older and more responsible, you could still get

AIDS if you decide to have sex.

Janet: That's true. We just have to be safe. We need to know the histories of our partners and we have to take precautions.

Mark: I know a lot of people who are already sexually active. They're sure not gonna stop until they're more responsible.

Janet: You're probably right, Mark. If they aren't going to wait to have sex until they're married, then they have to be as safe as possible. They should always use condoms and contraceptive jelly with nonoxynol-9—it helps to kill the virus before it gets in the bloodstream.

José: How come sharing needles causes AIDS?

Janet: Because a little bit of blood from the person who used the needle last stays in the syringe, then it gets transferred into the bloodstream of the next person to use it.

Suzy: How do they expect them to stop sharing?

Janet: A lot of them probably won't. But if they clean their needles with bleach each time they use them, they stand a good chance of killing the AIDS virus.

Mark: What about doctors and nurses? They can get stuck with needles by mistake and get AIDS, right? Isn't your mother worried?

Janet: It's true that health care workers have to be very careful when working with AIDS patients. But if they are well educated and don't forget to follow safe guidelines, then they have nothing to worry about.

José: They must not be very careful then, because a bunch of doctors and nurses have gotten AIDS.

Janet: That's not true, José. Very few doctors and nurses have been infected with the AIDS virus. And most of those that have become infected were not following safe health care guidelines.

Mark: What a rotten disease.

Janet: It sure is. One of the worst things is that many people don't even know they have been infected. Sometimes it can take up to seven years or even longer before any symptoms appear.

Suzy: You mean people who have the AIDS virus in their systems can give it to other people and not even know it?

Janet: That's right, Suzy.

Mark: Do people who get infected always die?

Janet: That's a good question, Mark. Nobody knows for sure. They do know that infected people who come down with symptoms usually die within two years. Some have lived longer. We do know most people infected eventually get sick. And, because we don't have a good treatment for AIDS, most of them will die eventually.

José: Even Mike?

Janet: Yeah, even Mike.

TEACHER

# TRUTHS AND MYTHS LIST

## Truths

- Chlorine bleach (one part bleach to ten parts water) can kill HIV outside the body.
- Nothing can kill HIV, so far, inside the bloodstream.
- Nonoxynol-9 is believed to kill cell-free virus (virus outside of a cell).
- HIV can be found in most body fluids.
- Tears and saliva have slight traces of HIV.
- No known cases have been transmitted through tears and saliva.
- AIDS can be prevented.
- AIDS can be transmitted through blood, semen and vaginal fluids.
- AIDS can be transmitted through unsafe sexual practices.
- AIDS can be prevented through safe sexual practices.
- AIDS can be transmitted through sharing contaminated needles.
- Mothers with AIDS can transmit it to their unborn babies.
- Very few health care workers have gotten the AIDS virus from working with AIDS patients.

## Myths

- You can catch AIDS through sneezing.
- You can catch AIDS through kissing on the lips.
- You can catch AIDS in showers.
- You can catch AIDS from sweat.
- You can catch AIDS from attending school with a classmate who is infected with HIV.
- You can catch AIDS from toilet seats.
- You can catch AIDS from drinking faucets.
- You can catch AIDS drinking from someone's glass.
- People who get AIDS are bad people.
- Only gay men get AIDS.
- Everybody's probably going to get AIDS eventually.
- Heterosexuals don't ever need to worry about AIDS.

STUDENT

# TRUTH OR MYTH WORKSHEET

Read the following statements about AIDS and HIV (the AIDS virus) and decide whether they are TRUTHS or MYTHS. Write the correct answer on the line in front of each statement.

_____ 1. Chlorine bleach can kill HIV outside the body.

_____ 2. You can catch AIDS from drinking faucets.

_____ 3. You can catch AIDS drinking from someone's glass.

_____ 4. Nothing can kill HIV, so far, inside the bloodstream.

_____ 5. You can catch AIDS from attending school with a classmate who is infected with HIV.

_____ 6. HIV can be found in most body fluids.

_____ 7. You can catch AIDS from toilet seats.

_____ 8. Tears and saliva have slight traces of HIV.

_____ 9. No known cases of AIDS have been transmitted through tears and saliva.

_____ 10. AIDS can be prevented.

_____ 11. You can catch AIDS in showers.

_____ 12. AIDS can be transmitted through blood, semen and vaginal fluids.

_____ 13. You can catch AIDS from sweat.

_____ 14. AIDS can be transmitted through unsafe sexual practices.

_____ 15. AIDS can be prevented through abstinence and safe sexual practices.

_____ 16. You can catch AIDS through kissing on the lips.

_____ 17. AIDS can be transmitted through sharing contaminated needles.

_____ 18. You can catch AIDS through sneezing.

_____ 19. Mothers with AIDS can transmit it to their unborn babies.

TEACHER

# TRUTH OR MYTH WORKSHEET

*Key*

Read the following statements about AIDS and HIV (the AIDS virus) and decide whether they are TRUTHS or MYTHS. Write the correct answer on the line in front of each statement.

TRUTH 1. Chlorine bleach can kill HIV outside the body.

MYTH 2. You can catch AIDS from drinking faucets.

MYTH 3. You can catch AIDS drinking from someone's glass.

TRUTH 4. Nothing can kill HIV, so far, inside the bloodstream.

MYTH 5. You can catch AIDS from attending school with a classmate who is infected with HIV.

TRUTH 6. HIV can be found in most body fluids.

MYTH 7. You can catch AIDS from toilet seats.

TRUTH 8. Tears and saliva have slight traces of HIV.

TRUTH 9. No known cases have been transmitted through tears and saliva.

TRUTH 10. AIDS can be prevented.

MYTH 11. You can catch AIDS in showers.

TRUTH 12. AIDS can be transmitted through blood, semen and vaginal fluids.

MYTH 13. You can catch AIDS from sweat.

TRUTH 14. AIDS can be transmitted through unsafe sexual practices.

TRUTH 15. AIDS can be prevented through abstinence and safe sexual practices.

MYTH 16. You can catch AIDS through kissing on the lips.

TRUTH 17. AIDS can be transmitted through sharing contaminated needles.

MYTH 18. You can catch AIDS through sneezing.

TRUTH 19. Mothers with AIDS can transmit it to their unborn babies.

LESSON 11

# SYMPTOMS DON'T REVEAL EVERYTHING

## Objective

Students will identify the symptoms related to AIDS. Students will be able to explain why it is difficult to determine HIV infection.

## Time

One 50-minute period

## Overview

Many students may already be at risk for HIV (the AIDS virus) infection or may make choices in the future that could put them at risk. These students must be knowledgeable about the continuum of AIDS infection, from exposure to the virus, to ARC, to AIDS itself. They must also understand that being tested or knowing your health history is the only sure way to know if you've been exposed to the AIDS virus (HIV).

This lesson uses a simulation to show students a variety of symptoms for the different possible conditions related to AIDS. Volunteers are given clues as to their condition and then asked to

guess their condition. Students will learn that observing symptoms alone is not enough.

## Instructional Strategies

Simulation, class discussion, quiz.

## Teacher Materials and Preparation

**MAKE:**

✓ (optional) Make five headbands out of elastic or cloth. Sew a small piece of Velcro to the outside of each. (Straight pins can be used instead of Velcro.)

✓ (optional) Cut out the **AIDS-Related Conditions Labels** and glue to cardboard or tagboard of the same size. Attach a piece of Velcro to the back of each label. (A straight pin can be used instead of Velcro.)

**COPY:**

✓ Make one copy per student of the **Symptoms Clue Sheet** and the **Symptoms: True or False Quiz**.

## Procedure

■ Call on five students to volunteer as assistants for this lesson. Ask them to leave the room while you brief the rest of the class and distribute the **Symptoms Clue Sheets.** Ask some students to read the conditions, symptoms and clue ideas to the class.

■ Tell the students it is their responsibility to try to give the five volunteers clues as to what conditions they are portraying, without telling them directly. Students are only allowed to tell the volunteer something about his or her health that they have noticed lately.

■ Have the five volunteers return to the classroom. If you are using headbands and labels, place one of each on the volunteers' heads, making sure they don't see their labels. If you are not using the headbands and labels, place five chairs against the blackboard and ask each volunteer to take a seat. Once they are

seated and facing away from the blackboard, write one of the five conditions above each volunteer.

■ Tell students you will begin by giving the first two clues. To the student who is "Healthy Without HIV Infection" say, "Hey, Mike, it really amazes me how healthy you always are. You must eat right." To the student who is "Healthy but Infected With HIV" say, "Gee, Sue, how is it you can belong to all those clubs, participate on all those teams, keep a 4.0 average and always be so healthy?"

■ Call on class members to give their clues to the volunteers. Make sure each student has a chance to give a clue. Have the students rotate the clues so the volunteers each get the same number of clues.

■ When all students have given their clues and all symptoms from the handout have been shared with the volunteers, ask the volunteers to guess what is wrong with them, if anything, and explain why they feel that way. When they have all made their guesses, have them look at their labels.

■ Discuss with the volunteers who made incorrect guesses what threw them off the track. It is possible that all volunteers except the one with the AIDS label will make incorrect guesses. Distribute the handout to the volunteers so they may also look at the labels and the related symptoms.

■ Discuss with the class the similarities between the "Healthy Without HIV Infection" symptoms and the "Healthy but Infected With HIV" symptoms. Explain that a large number of people who have been infected with HIV are completely healthy and have no knowledge they are infected.

■ Discuss the similarities between the "Sick Without HIV Infection" and the "AIDS-Related Complex" or "AIDS" conditions. Tell students that most of the symptoms of AIDS or ARC are very similar to the symptoms of many other illnesses such as the flu or the common cold. Having these symptoms alone is no reason to assume you have AIDS. However, if you have engaged in any behavior that is risky (IV drug use, unsafe sexual activities or blood transfusions before 1985) and you exhibit chronic symptoms, then it may be a good idea to be tested.

■ This is a good time to tell students that the only sure way to

know if you have AIDS is to be tested or to know your health history. Emphasize the importance of knowing your own health history; in other words, if you have engaged in any at-risk behaviors such as unsafe sex, sharing needles or receiving blood before 1985. Inform students that the tests are very reliable although they have occasionally been found to be inaccurate. Discuss the importance of being counseled before and after having a test, as the results can be devastating if not properly prepared for.

■ Distribute the **Symptoms: True or False Quiz** and correct with students upon completion.

## Alternative Strategy for More Advanced Students

Instead of using the quiz, have students write an essay suggesting why looking at symptoms alone is not an accurate way to diagnose whether a person is infected with the AIDS virus.

## Evaluation

Teachers will examine quizzes and/or essays to determine students' understanding of the symptoms of AIDS.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

STUDENT

# SYMPTOMS: TRUE OR FALSE QUIZ

Read each sentence below and fill in the blanks with either TRUE or FALSE.

1. Physically fit people never get AIDS. _____

2. Some people have been infected with HIV and don't even know it. _____

3. If you never engage in at-risk behaviors you probably won't ever get AIDS. _____

4. Purple spots on the skin and white sores in the mouth can be symptoms of AIDS. _____

5. If you get regular exercise and eat well you can't get AIDS. _____

6. Knowing your health history is one way to understand if you have any risk of AIDS. _____

7. A special blood test can tell you if you've been infected with the AIDS virus. _____

8. If you have swollen glands and a fever you probably have AIDS. _____

9. Some people infected with HIV are still good athletes. _____

10. If you maintain a normal weight you haven't been infected with HIV. _____

TEACHER

# SYMPTOMS: TRUE OR FALSE QUIZ

*Key*

Read each sentence below and fill in the blanks with either TRUE or FALSE.

1. Physically fit people never get AIDS. FALSE

2. Some people have been infected with HIV and don't even know it. TRUE

3. If you never engage in at-risk behaviors you probably won't ever get AIDS. TRUE

4. Purple spots on the skin and white sores in the mouth can be symptoms of AIDS. TRUE

5. If you get regular exercise and eat well you can't get AIDS. FALSE

6. Knowing your health history is one way to understand if you have any risk of AIDS. TRUE

7. A special blood test can tell you if you've been infected with the AIDS virus. TRUE

8. If you have swollen glands and a fever you probably have AIDS. FALSE

9. Some people infected with HIV are still good athletes. TRUE

10. If you maintain a normal weight you haven't been infected with HIV. FALSE

STUDENT

# SYMPTOMS CLUE SHEET

| CONDITIONS | SYMPTOMS | CLUE IDEAS |
|---|---|---|
| HEALTHY WITHOUT HIV INFECTION | PHYSICALLY FIT, ACTIVE, GOOD DIET, REGULAR EXERCISE, MAINTAINS WEIGHT, NEVER GETS SICK | "MIKE, IT'S GREAT THAT YOU'RE SO GOOD AT SO MANY DIFFERENT SPORTS." |
| HEALTHY BUT INFECTED WITH HIV | PHYSICALLY FIT, ACTIVE, GOOD DIET, REGULAR EXERCISE, MAINTAINS WEIGHT, NEVER GETS SICK | "HEY, SUE. HOW CAN YOU SWIM SO MANY LAPS LIKE THAT DAY AFTER DAY?" |
| SICK WITHOUT HIV INFECTION | FATIGUE, FEVER, CHILLS, WEIGHT LOSS, SWOLLEN GLANDS, DIARRHEA | "YOU'VE SURE MISSED A LOT OF SCHOOL LATELY. HAS THAT COLD GOTTEN ANY BETTER?" |
| ARC AIDS-RELATED COMPLEX | FATIGUE, FEVER, CHILLS, WEIGHT LOSS, SWOLLEN GLANDS, CONSTANT DIARRHEA, WHITE SPOTS IN MOUTH | "IT'S GOOD TO SEE YOU BACK IN SCHOOL. HAVE YOU FINALLY GOTTEN OVER YOUR FEVER?" |
| AIDS | FATIGUE, FEVER, CHILLS, WEIGHT LOSS, SWOLLEN GLANDS, CONSTANT DIARRHEA, WHITE SPOTS IN MOUTH, PURPLE SORES ON SKIN, PNEUMONIA (PCP) | "I'M SORRY TO HEAR YOU'VE GOT PNEUMONIA AGAIN, SAM." |

TEACHER

## AIDS-RELATED CONDITIONS LABELS

**HEALTHY WITHOUT HIV INFECTION**

**HEALTHY BUT INFECTED WITH HIV**

**SICK WITHOUT HIV INFECTION**

**ARC AIDS-RELATED COMPLEX**

**AIDS**

LESSON 12

# AIDS, DEATH AND COMPASSION

*For more advanced students*

## Objective

Students will demonstrate compassion for a person with AIDS.

## Time

One 50-minute period

## Overview

Death touches all our lives eventually. Death from old age is accepted as from natural causes. Accidental death is shocking and is something a teacher must deal with in the classroom, especially in the case of the death of a classmate or a known teen suicide. Death from AIDS, on the other hand, has its own characteristics.

In this lesson students hear a reading about the death of a person with AIDS. Students consider what it would be like to to know you have just a short time to live. Activities are suggested to enhance understanding and compassion for those who know they are dying.

## Instructional Strategies

Reading and listening, class discussion, creative writing.

## Teacher Materials and Preparation

**COPY:**

✓ Make one copy per student of the poem "I've Got My Freedom" by Larry Folsom.

**OBTAIN:**

✓ (optional) The names of Persons With AIDS (PWAs) who would like to receive letters from students can be obtained from your local AIDS project.

## Procedure

■ Introduce this lesson to the students by reading the following quotation from the Centers for Disease Control "Guidelines for Effective School Health Education to Prevent the Spread of AIDS" (Centers for Disease Control. 1988. *Morbidity and Mortality Weekly Report* 37).

> "Most infected people who develop symptoms of AIDS only live about 2 years after their symptoms are diagnosed."

■ Hand out copies of the poem "I've Got My Freedom." Tell students the poem was written by Larry Folsom when he knew he had AIDS. Read the poem to the class.

■ Discuss which lines talk about death, which about AIDS. Ask if students can tell how the writer feels about what is happening.

■ Read the following to the class, adapted from a piece by Jim Schultz and Dan Brady that appeared in *The Volunteer News of the Santa Cruz AIDS Project*, May/June 1988.

### *Larry Folsom*

*His obituary began: "Services are Thursday for Larry Folsom, who*

*died Tuesday after a long illness. He was 27." His obituary ended: "Contributions to the Hospice are preferred."*

*Ironically, one of the last things to outrage Larry Folsom was a similar obituary he read about a friend of his in a nearby town. "They totally white-washed the truth," he said.*

*In fact, Larry's friend had died of AIDS. But in spite of the AIDS education blitz, most people choose to avoid any mention of a family member dying of AIDS. That incensed Larry Folsom. And with good reason.*

*Larry worked at a local hospital for eight years, where he established many of his long-term friendships. Some of those friends were later called upon to help establish the local AIDS project. Larry's love of singing and his desire to help people with AIDS seemed a natural combination for his participation in variety show fundraisers for the local AIDS project. That association was important to him.*

*But during his performance in the 1987 variety show, one couldn't help but see a change in Larry Folsom. In the following month his worst fears were realized when he was diagnosed with AIDS. He became a recluse, shutting himself off from his friends. But with time and some friendly encouragement he slowly started dealing with his denial and his feelings of guilt and shame.*

*That's when Dan Brady, a close friend since their teens, brought a new dimension to their friendship. Driven by the frustration of not knowing how to give Larry the kind of emotional support he needed, Dan took the "buddy" training at the local AIDS project, designed specifically to teach volunteers how to give support to Persons With AIDS (PWAs). The resulting bond between best friends became stronger and more powerful than either of them could have imagined.*

*They constantly dealt with the slow, debilitating effects that AIDS had on Larry's body. They worked through the intense anger that Larry felt knowing that his life was being yanked away from him while he was still in his twenties. They consoled one another through the desperation of never knowing those things that might have been.*

*All the while, however, Larry was out there, sharing his adventure*

*with anyone who had the guts to ask, "What is it like to be living with AIDS?" Larry earned the admiration and respect of everyone he knew as he faced an ominous future with honesty, courage and dignity.*

*He didn't do it alone, that's true.*

*Dan was there. Kathy was there for him, too. She was a special joy in Larry's life. And when the going got really rough and Larry could no longer care for himself, his mother and grandmother saw to his every need, every moment.*

*Shortly after being diagnosed with AIDS, Larry wrote the song "I've Got My Freedom" with the intention of singing it at the 1988 variety show fundraiser.*

*Larry died at peace with himself on a Tuesday morning, April 19, 1988. And, in the last year of his life he grew more than in the 26 years prior. He taught us all a bit about conviction, compassion and character.*

*So, you see, Larry didn't just die "after a long illness." Larry did battle with AIDS, and he won, and he died.*

■ Begin a discussion of how it would be to die from AIDS. A person with AIDS would know that they were going to die. What experiences in life would they miss by dying at an early age? Discuss how it would feel knowing while you were very sick that you would not get well again. It may be appropriate to explain to students that many people believe a person goes through five emotional stages when they are confronted with their own death: (1) shock and denial; (2) anger; (3) bargaining; (4) depression; and (5) acceptance.

■ Discuss how people can get ready to die. Explain how the *Hospice* movement helps people. Its members believe that dying is a natural part of life and the quality of a patient's remaining life is very important. They also believe that people should be able to choose where they will spend their last days, whether at home or in a hospital, getting the best care and support possible, and that no one should die alone. Surviving family members will need support after their loved one has died.

■ Conclude the lesson with a creative writing session, having stu-

dents write a letter to a Person With AIDS (PWA).

If possible, obtain names from your local AIDS project of PWAs who would like to receive mail. If this is not possible, have students imagine that they are writing to a "real" Person With AIDS.

■ Allow students to finish writing outside of class if they need extra time. When letters are completed have students read their work to each other in small response groups.

## Evaluation

Teacher will read students' letters to observe compassion for people with AIDS.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

Story on Larry Folsom reprinted with permission from Jim Schultz and Dan Brady. From *The Volunteer News of the Santa Cruz AIDS Project*, May/June 1988. Santa Cruz, CA: The Santa Cruz AIDS Project.

STUDENT

# I'VE GOT MY FREEDOM

Locomotion—that's what it is
Moving on the track—to destiny

Give me an A
Give me an I
Give me a D and an S
(Uhhh...uhh, uh-huh)

It stands for ALIVE
In a death sentence

Where is the hope, the faith, the dream?
Pick up the pieces and plot out that dream
Any one of us could die tomorrow

What do you want?
Follow that rainbow
On a horse up into the sky

Where, oh where has my little child inside
gone?
Where, oh where can it be?

I need to lighten up and learn to play
hey hey

I'm free from life games
As we usually play them
I can do what I want to do

Don't have to go to my
In-laws for tuna casserole
Or worry about parking tickets

I've got my freedom
To FLY, FLY, FLY...

*Larry Folsom*
*(1961-1988)*

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"I've Got My Freedom" is reprinted with permission from *The Volunteer News of the Santa Cruz AIDS Project*, May/June 1988. Santa Cruz, CA: The Santa Cruz AIDS Project.

LESSON
13

# AIDS: OPPOSING VIEWPOINTS

*For more advanced students*

## Objective

Students will be able to analyze two opposing viewpoints to a specific AIDS-related issue.

## Time

One 50-minute period for introduction and dialogue writing
One 50-minute period for presentation of dialogues

## Overview

Before students can become active participants in solving the range of problems related to AIDS, they must first be able to identify the relevant issues. Once the issues are recognized, students must then be able to understand all sides of an issue.

This lesson begins with students generating a list of issues related to AIDS. Pairs of students will choose one issue of interest, then write a dialogue together representing two different opinions on the issue.

## Instructional Strategies

Research, writing, dramatic presentations, cooperative learning groups.

## Teacher Materials and Preparation

**COPY:**

- ✓ Make one copy per student of the **Issues Description Information Sheet**.
- ✓ Make a transparency of the **Sample Dialogue** to use with overhead projector.

**REVIEW:**

- ✓ Familiarize yourself with the **Issues Description Information Sheet** and the **Sample Dialogue.**

## Procedure

■ Have students recall what they know about AIDS. Ask them to consider the social problems caused by AIDS, the political and economic problems and public response to AIDS. List issues they raise on the board.

■ Tell students they will be examining one of these issues a little more closely. They will be choosing partners to work with on one specific issue. The issues include testing, persons with AIDS in schools, economics, isolation, employment, health care and AIDS education in public schools.

■ Have students form their partnerships, then distribute copies of the **Issues Description Information Sheet** to each student. Have volunteers read the descriptions aloud. Ask pairs of students to consider the issues and think of one on which they would like to focus.

■ Design a random method for allowing students to choose issues on which they will be working. Make sure to balance the number of groups working on each issue, with two or three per issue.

■ Tell students they will be using the information from the description of their issues to write a dramatic dialogue between two

people with opposing viewpoints. Use an overhead projector to show students the **Sample Dialogue** transparency. Ask for two volunteers to read the parts of the dialogue. Review the process for writing dramatic dialogue, reminding students to use names and colons before each character's statements.

■ Give students the remainder of the period to study the descriptions of their issues and write their dramatic dialogues. Although students will be creating the dialogues in pairs, each student will need a copy of the written dialogue for the presentation. Have students present their finished products to the class on the following day.

■ On the following day, call on pairs randomly to present their dialogues to the class. More advanced students might memorize their dialogue for a more dramatic presentation. Otherwise, allow students to read from their written dialogues.

## Evaluation

Teacher observation of written dialogues and oral presentations to determine student understanding of opposing viewpoints on specific issues related to AIDS.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Record debates and expert discussions of AIDS issues to share with students. If the school has a video camera, record the students' presentations to show at a later date.

Ask students to choose one AIDS-related issue and write a position paper stating their own opinions on the issue.

# ISSUES DESCRIPTION INFORMATION SHEET

## TESTING FOR AIDS

Viewpoint 1

The only way to be sure someone is or isn't infected with HIV (the AIDS virus) is to test his or her blood for the presence of the virus. There are many aspects to consider when thinking about testing for the HIV infection. Some people think everybody should be tested so we can find out exactly who has the AIDS virus and then isolate them. Others think everybody who is admitted to a hospital should be tested to protect the health care workers who might come in contact with the patient.

Viewpoint 2

Another group believes that individuals should have the right to decide about testing for themselves. If they don't have that right, some people fear that required testing could be used in a discriminatory way. They feel their civil rights are in jeopardy if they are forced to be tested for the AIDS virus (HIV infection).

## PERSONS WITH AIDS IN SCHOOLS

Viewpoint 1

Some people believe that if students have AIDS or HIV infection they should not be admitted to public schools. Parents have fears that their own children may come in contact with a person with HIV infection and catch the virus. These people sometimes lead protests, complain to school boards or even take their own children out of schools.

Viewpoint 2

An alternative belief is that students with HIV infection have the same rights as other students and that schools owe them the same education. Those who hold this belief feel that students with HIV infection offer no danger to other students, as the HIV infection can only be transmitted through intimate contact with blood, semen or vaginal fluids.

## AIDS EDUCATION IN PUBLIC SCHOOLS

Viewpoint 1

Many people feel that everything we know about AIDS should be taught in schools, beginning at the earliest possible grade. They believe that prevention of AIDS will only happen through honest and informative education. AIDS education should be included as an important part of family life studies, addressing the importance of understanding safe and unsafe sexual practices.

Viewpoint 2

On the other hand, some people believe that we must limit the amount of information we give students about AIDS, especially about how it is transmitted. These people feel students should simply be told to abstain from sex until they are ready for marriage and they shouldn't be taught about safe sex because it could encourage early sexual activity.

## ECONOMICS

Viewpoint 1

The amount of money spent on AIDS education and research is a source of constant debate. Many people would like to see our government spending as much as it possibly can on AIDS research. They feel that the people suffering with AIDS are not being treated fairly because the majority are homosexuals and drug addicts.

Viewpoint 2

Those people in the positions of making money available to spend on AIDS feel that they are spending quite a bit of money on the problem. They feel that a steady increase of money has been directed toward AIDS research and that they have addressed the problem well.

## ISOLATION

Viewpoint 1

There are many people who believe that every person with AIDS should be taken somewhere and isolated from other people. They believe the only way to stop the spread of AIDS is to remove those people infected from the midst of our society.

Viewpoint 2

Other people certainly don't feel that way. They feel that people with AIDS have an illness like anybody else and that illness will not spread simply by being around others. They say there have been no known cases of AIDS transmission through casual contact, drinking from the same glass or living in the same house as a person with AIDS.

## EMPLOYMENT

Viewpoint 1

Many employers have fired people with AIDS upon finding out they are infected with HIV (the AIDS virus). They feel that other workers would be unhappy about the possibility of catching AIDS from a coworker and they are also worried about the possibility of lawsuits against them in case someone did catch AIDS from a coworker.

Viewpoint 2

Other people feel that people with AIDS are not a threat to coworkers because AIDS can only be transmitted through blood, semen and vaginal fluids. Many people infected with the AIDS virus are perfectly healthy and able to perform their jobs without difficulty.

## HEALTH CARE

Viewpoint 1

Most people with AIDS have extremely high medical expenses and often don't have enough money to afford adequate care. They feel the government should provide the health care they need, as they aren't able to provide it for themselves.

Viewpoint 2

Other people feel people with AIDS should take care of themselves, just like anyone else. They don't want to see their taxes being used to support homosexuals or drug addicts.

TEACHER

# SAMPLE DIALOGUE

**Issue: Testing for AIDS**

John: You know, I think if we're ever going to stop AIDS from spreading, everybody should have their blood tested.

Mary: What good will that do?

John: Well, for example, if we test everybody who checks into hospitals for HIV infection, then we'll know better how to care for them and make sure our doctors and nurses are protected.

Mary: I disagree. I think people should decide for themselves if they want to be tested or not. The Constitution gives us certain rights and we shouldn't be forced to have a test for AIDS against our will.

John: But if we don't know who is carrying the AIDS virus (HIV), then a lot of innocent people may die.

Mary: Yes, but if we force everybody to be tested, then a lot of innocent people may be discriminated against. Just because they have HIV doesn't mean they're some kind of a creep. Anybody can get AIDS.

John: And everybody might get AIDS if we don't know who is spreading the disease. I say we have to test everybody just to be safe.

Mary: And I say people must have the right to make their own decisions. If people want to be tested, they can go to special places and have the test without anybody knowing. That's the only way to protect people's rights.

John: But what about the rights of those people who will die because they come in contact with someone infected with HIV (the AIDS virus) who refused to be tested?

LESSON 14

# AIDS: THE SOLUTION IS OURS

## Objective

Students will be able to synthesize possible solutions to AIDS-related problems.

## Time

One 50-minute period for preparation
One 50-minute period for presentations (optional)

## Overview

The end of the AIDS epidemic will become a reality only when we have succeeded in educating all people about AIDS, have them actively engaged in debate as to appropriate solutions, and have them suggesting and implementing solutions and programs that will ensure an AIDS-free future.

In this lesson students will consider everything they have learned about AIDS. They will apply their knowledge toward suggesting a plan of attack to address one AIDS-related problem.

## Instructional Strategies

Brainstorming, worksheets, oral presentations, cooperative learning groups, proposal writing.

## Teacher Materials and Preparation

**HAVE:**

✓ Make available to students any materials used in previous lessons to assist them in the development of their proposals.

**COPY:**

✓ Make one copy per student of the **AIDS-Related Problems Worksheet**.

✓ Make a transparency of the **AIDS-Related Problems Worksheet Example** to use with overhead projector.

**REVIEW:**

✓ Familiarize yourself with the **AIDS-Related Problems** and the **AIDS-Related Problems Worksheet Example.**

## Procedure

■ Ask students if they think the problems related to AIDS will be solved within their lifetime. Have them give their opinions and the reasons they feel that way. Suggest that the way problems usually get solved is that people get together and think about the problems and suggest solutions. Ask them if posing solutions is enough to solve problems. Suggest that solutions must then be put into action and carried out.

■ Have students think about all they have learned related to AIDS. Ask them to write down one problem that exists because of AIDS. *Example*: Many patients can't afford health care.

■ When students have finished writing problems, call on them to share with the class. List the problems on the board. When students have no more problems to share, add any from the **AIDS-Related Problems** sheet that haven't already been mentioned.

■ Tell students to pick one problem from the list and develop a plan or proposal that could help solve that problem. Let them work individually, in pairs or in small groups.

■ Use the **AIDS-Related Problems Worksheet Example** provided to show students what is expected. Either make a transparency to be used on an overhead projector, make copies for each student or simply transfer the information onto the board.

■ After students understand the example, distribute copies of the **AIDS-Related Problems Worksheet** and give them the remainder of the period to complete.

■ (optional) When students have completed their proposals, have them make presentations to the class. Ask for student input following the presentations. Do they think any of these suggestions will ever happen? What changes must occur in our society for them to happen? What can they do themselves right now?

## Alternative Strategy For Advanced Students

For students who are advanced or in higher grade levels, divide them into groups of four following procedure.

■ Ask students to brainstorm in their groups and develop a list of problems related to AIDS. Have them prioritize the list and choose the most important problems and develop a comprehensive plan to address those problems. Students can use the **AIDS-Related Problems Worksheet** to lay out their information before writing their final proposal.

## Evaluation

Teachers will collect worksheets and check for student understanding of solutions and action based on specific AIDS-related problems.

Students will write "I learned" statements and rank themselves on individual and/or group participation.

## Follow-up/ Extension

Create a newsletter using each problem as a separate editorial.

TEACHER

# AIDS-RELATED PROBLEMS

1. Many patients can't afford health care.
2. Many people will die from AIDS.
3. There is no cure for AIDS.
4. There are no vaccines for AIDS.
5. Tests for HIV are not 100% accurate.
6. Some people kill themselves when they find out they are infected with HIV.
7. Some students with AIDS are discriminated against and are not allowed to attend some schools.
8. Not all students are learning about AIDS in schools.
9. Not all adults are learning factual information about AIDS.
10. Many people feel the government doesn't spend enough money on AIDS research.
11. Some people with AIDS lose their jobs because of their employers' fears.
12. Many AIDS patients have no one to care for them or love them.
13. Drug addiction is one reason AIDS has spread so quickly.
14. Using dirty needles is one reason AIDS has spread so quickly.
15. Unsafe sexual practices is one reason AIDS has spread so quickly.
16. Many people feel it is unsafe to give blood.
17. Many people say, "It can never happen to me."

STUDENT

# AIDS-RELATED PROBLEMS WORKSHEET

NAME _____ DATE _____

Choose one AIDS-related problem from the list on the board. Fill out the worksheet below for the problem you have chosen.

**1. The problem I have chosen is**

**2. The reason it is a problem is**

**3. One way to help solve this problem is**

**Another way is**

STUDENT

4. Something I can do right now is

Another thing I can do right now is

TEACHER

# AIDS-RELATED PROBLEMS WORKSHEET

*Example*

**NAME** _____ **DATE** _____

Choose one AIDS-Related problem from the list on the board. Fill out the worksheet below for the problem you have chosen.

1. **The problem I have chosen is** *that not all students are learning about AIDS in school.*

2. **The reason it is a problem is** *some people don't want their kids to learn about AIDS in school. Also there aren't a lot of good materials available to teach with right now. Some schools can't afford to spend money on AIDS materials.*

3. **One way to help solve this problem is** *to donate money to people who are trying to help bring AIDS education into the schools.*

   **Another way is** *for teachers to consult with health workers who know about AIDS and bring information to students.*

   **Another way is** *to make sure that everybody knows why it is so important for students to learn the facts about AIDS. That way everybody will support AIDS education in schools.*

4. **Something I can do right now is** *to write a letter to the editor of my local newspaper to let people know how much I learned about AIDS in school and how it might save my life and others.*

   **Another thing I can do right now is** *to put together a school or class newspaper to let parents and other students know about AIDS and how serious it is.*

APPENDIX
A

# GLOSSARY

# GLOSSARY

**AIDS**
Acquired Immune Deficiency Syndrome. A viral disease which damages the body's immune system, making the infected person susceptible to a wide range of serious diseases. May also involve neurologic symptoms.

**antibody**
Proteins produced in the blood in response to toxins or other foreign organisms. Antibodies in some cases can neutralize toxins and help eliminate infections, though in the case of AIDS, antibodies are not effective in combating the disease.

**ARC**
AIDS-related complex. A diagnosis given to people infected with the AIDS virus who have symptoms of illness related to this infection, but do not meet the diagnostic criteria necessary to be given a diagnosis of AIDS.

**ARV**
The name given the AIDS virus by Jay Levy of the University of California, San Francisco. Stands for AIDS-associated retrovirus.

**blood transfusion**
To put blood into the veins of an individual. First, blood is withdrawn from a donor. It may be stored for some period of time. Then, to treat injury or illness, a recipient is given this donated blood.

**carcinoma**
A malignancy, or cancer, made up of a particular kind of cells and with a tendency to metastasize, or spread. The cells of a carcinoma are epithelial cells, which cover the internal and external surfaces of the body.

**casual contact**
Normal day-to-day contact between people at home, school, work or in the community, which does not involve sexual interaction or the sharing of needles.

**casual transmission**
Transmission of disease through casual contact. Colds and flus are often casually transmitted. The AIDS virus is not transmitted casually.

**CDC**
The Centers for Disease Control, a federal agency based in Atlanta which studies and moni-

tors the incidence and prevalence of disease in the U.S., and also provides health and safety guidelines for the prevention of disease.

### cellular immunodeficiency
A defect in the immune system characterized by poor functioning of the T-cells. This is the kind of immune deficiency seen in HIV infection. Other immune deficiencies may affect the B-cells ("antibody immunodeficiency"), the phagocytes ("phagocytic dysfunction disorders") or the lymphoid cells ("combined immunodeficiency").

### condoms
Also called rubbers or prophylactics. A latex sheath used to cover the penis during intercourse to prevent pregnancy and the transmission of diseases. Latex condoms are effective in preventing the transmission of the AIDS virus. "Natural skin" condoms are not as reliable for the prevention of disease.

### disease
A particular destructive process in an organ or organism with a specific cause and characteristic symptoms; an illness.

### EIA
Another way to abbreviate "enzyme-linked immunosorbent assay," hence the same thing as "ELISA."

### ELISA
A test used to detect HIV antibodies in blood samples. The most inexpensive and widely used test to date. Stands for enzyme-linked immunosorbent assay.

### epidemiology
The study of the distribution and causes of diseases.

### false negative
In an AIDS antibody test, a result that reads negative when there is actually antibody in the blood. A type of erroneous result.

### false positive
In an AIDS antibody test, a result that reads positive when there is actually no antibody in the blood. A type of erroneous result.

### hemophilia
A rare, inherited bleeding disorder of males in which normal blood clotting is not possible.

Treated with Factor VIII, a product made of human blood which allows normal clotting to occur.

### HIV
The accepted scientific name for the AIDS virus, in most common usage now. Stands for human immunodeficiency virus.

### HTLV-III
The name given the AIDS virus by Robert Gallo of the National Cancer Institute. Stands for human T-cell lymphotropic virus, type three.

### IFA
A test used to detect HIV antibodies in blood samples. More difficult to perform and more expensive than the ELISA. Also believed to be more specific (can accurately identify samples without antibody) than the ELISA, so sometimes used to verify ELISA results. Stands for immunofluorescent assay.

### immortal cell line
A special cell line developed for research purposes which is easily reproduced and survives well in laboratory conditions. In AIDS research, it was necessary to discover and develop a line of T-cells which could be used to study HIV in laboratory settings.

### immune system
The body's system of defense against disease, consisting of specialized cells and proteins in the blood and other body fluids.

### incubation
In a medical context, the length of time between an individual first being infected with a disease-causing organism and the development of symptoms or diagnosis. The incubation period for AIDS averages over five years.

### intercourse
A type of sexual contact involving one of the following: (1) insertion of a man's penis into a woman's vagina, called "vaginal intercourse"; (2) placement of the mouth on the genitals of another person, called "oral intercourse"; or (3) insertion of a man's penis into the anus of another person, called "anal intercourse."

### intravenous
"Within veins"; injection by needles directly into the blood veins.

### Kaposi's sarcoma
KS, a cancer or tumor of the blood and/or lymphatic vessel walls, sometimes seen in persons

with AIDS. Usually appears as pink or purple blotches on the skin.

### LAV
The name given the AIDS virus by Luc Montagnier of the Institute Pasteur, Paris. Stands for lymphadenopathy associated virus.

### lubricant
In this context, a substance applied to condoms or sexual organs which makes contact between condom and skin slippery. Lubricated condoms are more comfortable, safe and exciting. Lubricants can be purchased in most places where condoms are sold. Use only *water-based* lubricants with condoms, and read labels carefully—any fats or oils will break down the latex and may cause the condom to tear.

### lymphadenopathy
The condition of lymph nodes being swollen. Often a sign of infection or illness. People infected with the AIDS virus often have chronic lymphadenopathy.

### lymphoreticular malignancy
A malignant cancer of the lymph system. A malignancy based in the lymph system and its connecting structures, including lymphocytic leukemias, multiple myeloma, and non-Hodgkin's lymphoma. Leukemias are cancers of the blood, myelomas are cancers of the bone marrow, and non-Hodgkin's lymphomas are a heterogeneous group of lymph system malignancies.

### malignant
Tending to become progressively worse and to result in death.

### neurologic
Pertaining to the nervous system or brain. Persons infected with the AIDS virus often develop neurologic infection with symptoms such as forgetfulness, confusion, perceptual problems, lack of coordination or loss of muscle control.

### nonoxynol–9
A spermicide which has also been shown to kill the AIDS virus in laboratory studies. Available in some sexual lubricants which can be used with condoms, nonoxynol-9 is *not* an effective AIDS prevention method used on its own. Concentrations of 5% or more are recommended.

### opportunistic infection
An infection caused by organisms that are not able to affect people with healthy immune systems.

### parenteral
By injection. This can be subcutaneous, intramuscular, intravenous or through other entries.

**pathogen**
Any disease-producing microorganism.

**perinatal**
Pertaining to or occurring in the period shortly before or shortly after birth.

**PGL**
"Persistent generalized lymphadenopathy," a syndrome characterized by swollen lymph glands, usually in at least two sites for three months or longer. A common syndrome in persons who are HIV-infected. Lymph glands will also become swollen in reaction to many other infections.

**Pneumocystis carinii pneumonia**
PCP, the most common life-threatening opportunistic illness diagnosed in AIDS. Caused by a protozoan parasite, it creates difficulty in breathing and is the most common cause of death for people with AIDS.

**PWA**
Person with AIDS. Many people with AIDS prefer this term to others like "AIDS victim," or "AIDS patient." They would rather see themselves as active participants in their treatment and healing, not helpless victims who passively wait to die. They are whole and complete persons, and the term "patient" reduces them to little more than a case of disease.

**risk**
The chance of injury, damage or loss; dangerous chance; hazard.

**safer sex**
Sexual activity which protects one from infection with the AIDS virus. In safer sex, no body fluids are shared.

**secondary malignancies**
A malignancy that develops due to the metastases, or spread, of a primary (initial) malignancy; or a cancer which appears after but independent of a primary malignancy.

**secondary opportunistic infections**
A secondary infection that develops after the immune system has been weakened by an initial infection. The initial infection is often viral.

**secretion**
A substance generated from blood or cells which may have cleansing, lubricating or other characteristics.

**seropositive**
In the case of AIDS, the condition of having AIDS virus antibodies found in the blood.

**spermicide**
Any substance used to help prevent pregnancy because of its ability to kill sperm. One spermicide, nonoxynol-9, has also been shown to kill the AIDS virus in laboratory studies.

**STD**
Sexually transmitted disease, any of a number of diseases which can be transmitted through various forms of sexual contact. AIDS is a disease which is transmitted through sexual intercourse.

**surveillance**
In public health terms, monitoring and collecting data on incidence of disease—essentially, counting the number of cases.

**T-cell**
A specialized white blood cell which helps orchestrate the immune system's response to infection. The T-cell is invaded and disabled by the HIV virus.

**transmission**
Passed along. In the context of disease, passed from one individual to another.

**vaccine**
A preparation introduced to the body to produce immunity to disease. Historically, most vaccines have been made of weakened or killed disease organisms themselves. In the future, we may see vaccines which are genetically engineered non-lethal forms of such organisms.

**virus**
An organism formed of genes surrounded by a protein coating. Technically not living, since it cannot reproduce itself. Smaller than any living organism.

**Western Blot**
A test used to detect HIV antibodies in blood samples. More difficult to perform, and more expensive, than the ELISA. Also believed to be more specific (can accurately identify samples without antibody) than the ELISA, so sometimes used to verify ELISA results.

APPENDIX
B

# "I LEARNED..." EVALUATION RECORD SHEET

# "I LEARNED"

NAME _____ DATE _____

**Directions:** Write an "I learned" statement on the lines following the day, or write another statement or question as directed.

Rank yourself (Circle 4,3,2,1 or 0) each day on your level of Participation/Learning in this class using the following criteria: **(4)** I came to class prepared, listened well to both the teacher and my peers, followed directions, contributed to the success of my group and completed assignments; **(3)** I did all but one of the above; **(2)** I was in class and didn't feel like working; **(1)** I disrupted the class process; **(0)** I was absent.

Monday _____

_____ 4 3 2 1 0

Tuesday _____

_____ 4 3 2 1 0

Wednesday _____

_____ 4 3 2 1 0

Thursday _____

_____ 4 3 2 1 0

Friday _____

_____ 4 3 2 1 0

Student Comments: _____

_____

_____

Teacher Comments: _____

_____

_____

APPENDIX C

# AIDS PRE–POST TEST

# AIDS PRE–POST TEST

***True or False Questions***

_____ 1. AIDS is caused by a virus.

_____ 2. AIDS can be transmitted from mother to child during pregnancy.

_____ 3. AIDS can be transmitted by drinking from someone's water glass.

_____ 4. Very few doctors or nurses have caught AIDS from patients.

_____ 5. An active and healthy person won't get AIDS.

_____ 6. Some patients have been cured of AIDS.

_____ 7. AIDS can be prevented.

_____ 8. Epidemics cannot be stopped.

_____ 9. Blood-to-blood contact is the only way to transmit the AIDS virus from one person to another.

_____ 10. When someone dies of AIDS, it's because his or her immune system has broken down.

***Fill-In Questions***

1. The letters in AIDS stand for_____
2. Four organisms that cause disease are _____, _____, _____ and _____.
3. _____ and _____ are two body fluids that transmit the AIDS virus.
4. HIV stands for _____
5. Avoiding sexual contact is called_____

***Essay Questions***

1. Describe at least three ways to prevent AIDS.

2. Describe the ways the AIDS virus can be transmitted from person to person.

# AIDS PRE–POST TEST

*Key*

**True or False Questions**

T 1. AIDS is caused by a virus.
T 2. AIDS can be transmitted from mother to child during pregnancy.
F 3. AIDS can be transmitted by drinking from someone's water glass.
T 4. Very few doctors or nurses have caught AIDS from patients.
F 5. An active and healthy person won't get AIDS.
F 6. Some patients have been cured of AIDS.
T 7. AIDS can be prevented.
F 8. Epidemics cannot be stopped.
F 9. Blood-to-blood contact is the only way to transmit the AIDS virus from one person to another.
T 10. When someone dies of AIDS, it's because his or her immune system has broken down.

***Fill-In Questions***

1. The letters in AIDS stand for **Acquired Immune Deficiency Syndrome**.
2. Four organisms that cause disease are **bacteria, viruses, fungi and protozoa.**
3. **Blood** and **semen** are two body fluids that transmit the AIDS virus. [**Vaginal secretion** is also correct.]
4. HIV stands for **Human Immunodeficiency Virus**.
5. Avoiding sexual contact is called **abstinence**.

***Essay Questions***

1. Describe at least three ways to prevent AIDS. (**abstinence from sexual behavior, abstinence from IV drug use, having a monogamous relationship as in marriage, knowing partner's history, use of condoms, use of foam or contraceptive jelly with condoms**)
2. Describe the ways the AIDS virus can be transmitted from person to person. (**blood, semen, vaginal fluids, pregnancy**)

## ABOUT THE AUTHORS

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**Carole McPherson, MA** is a mentor teacher at Mission Junior High School in Santa Cruz, CA. Ms. McPherson has taught family life education at the elementary level for 12 years, and developed an elementary teacher training in family life education in 1981. Currently, she trains teachers in substance abuse prevention and presents seminars to help parents improve their communication skills and raise their children's self esteem. Ms. McPherson has worked closely with Sidney and Suzanne Simon for a number of years and is trained in cooperative learning and critical thinking.

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